TAXONOMY OF *LANTANA* SECT. *LANTANA* (VERBENACEAE): II. TAXONOMIC REVISION

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ABSTRACT

Twenty species of *Lantana* L. sect. *Lantana*, including thirteen subspecies and five varieties, are recognized and described, of which 15 species within four series are thought to have originated by divergence and five species are hypothesized to have originated by hybridization between species of different series. Keys are provided to all taxa. Six names are lectotypified and two are epitypified. Specimens documenting 115 putative hybrid combinations are cited. Newly described are ser. **Setosae,** ser. **Strigosae,** ser. **Spicatae,** and **Lantana hirsuta** subsp. **amazonica.** Nine new combinations are: **Lantana camara** subsp. **glandulosissima, Lantana camara** subsp. **moldenkei, Lantana camara** subsp. **moritziana, Lantana camara** subsp. **portoricensis, Lantana horrida** subsp. **tiliifolia, Lantana horrida** subsp. **zanonii, Lantana horrida** subsp. **zanonii** var. **sargentii, Lantana horrida** subsp. **zanonii** var. **subcordata,** and **Lantana paraensis. Lantana planaltensis** replaces *Lantana triplinervia* var. *hispida*.

RESUMEN

Se reconocen veinte especies de *Lantana* L. sect. *Lantana*, que incluyen trece subespecies y cinco variedades, de las que 15 especies incluidas en cuatro series se piensa que se han originado por divergencia y se hipotetiza que cinco especies se han originado por hibridación entre especies de diferentes series. Se aportan claves para todos los taxa. Se lectotipifican seis nombres y dos se epitipifican. Se citan especímenes que documentan 115 combinaciones de híbridos putativos. Se describen como nuevos ser. **Setosae,** ser. **Strigosae,** ser. **Spicatae,** y **Lantana hirsuta** subsp. **amazonica.** Se hacen nueve combinaciones nuevas: **Lantana camara** subsp. **glandulosissima, Lantana camara** subsp. **moldenkei, Lantana camara** subsp. **moritziana, Lantana camara** subsp. **portoricensis, Lantana horrida** subsp. **tiliifolia, Lantana horrida** subsp. **zanonii, Lantana horrida** subsp. **zanonii** var. **sargentii, Lantana horrida** subsp. **zanonii** var. **subcordata,** y **Lantana paraensis. Lantana planaltensis** reemplaza a *Lantana triplinervia* var. *hispida*.

Due to a long history of cultivation, hybridization, and invasiveness, the taxonomy of *Lantana* L. sect. *Lantana* resists partitioning into easily identified species (see Sanders 2006 for review). While some workers might prefer the convenience of recognizing a single highly variable species, *Lantana camara* L., previous biosystematic studies (Sanders 1987a, 1987b, 1987c, 1989) have shown the presence of morphologically discrete diploid taxa having coherent ecological and geographic ranges where they appear to have speciated *in situ*. These studies have been corroborated by a recent molecular analysis of the taxa in Florida (Maschinski et al. 2010). The present study attempts to delineate the indigenous taxa of sect. *Lantana*, even in the face of rampant hybridization due to human-induced ecological disturbance and the failure of odd polyploidy as a breeding barrier in this group. This second paper in the series builds on the first (Sanders 2006), which detailed the typification of species of sect. *Lantana*. As suggested by Sanders (2006), the identity of individual specimens constituting the hybrid plexus found growing outside cultivation today cannot be unraveled by morphology alone, and it may be recalcitrant even to molecular genome analysis. Thus, variation encompassing the indigenous species now connected by hybrids may appear to be constituted more of adaptive peaks rather than bell curves surrounded by discontinuity. Furthermore, no phylogenetic analysis has been attempted here because the outgroup relationships of sect. *Lantana* are not understood, and the significant trichome and inflorescence characters are homoplastic with regard to potential outgroups.

The rank of *series* is established only for grouping species of presumed origin by divergence from the ancestor of sect. *Lantana*. Species of interseries hybrid origin are not placed into series and are listed separately. These species are presumed to have originated by natural selection acting on the variable pool of original hybrids resulting in one or a few closely similar phenotypes and, thus, may not be strictly intermediate to the

parental species. The surviving phenotype has become self-propagating and has attained a geographic range exceeding the original area of sympatry. Spontaneous and cultivated hybrids that have received Latin names but do not behave biologically as species are in a third separate list.

I view *varietas* as the least inclusive taxonomic rank composed of a minimum of one breeding population (as inferred from available ecological data) having geographic coherence in a limited part of the species range and imperfect discontinuity from similar, geographically adjacent taxa within the species. *Subspecies* is used either to group varieties or to recognize a taxon within a species with geographic coherence over an extensive geographic range (e.g., usually several islands or subcontinental areas) and having imperfect discontinuity or minor differences from similar, geographically adjacent subspecies. One impetus to employ subspecies in *Lantana* has been to avoid instability in infraspecific names that could be caused by the subsequent discovery of poorly known varietal names, of which there are many.

MORPHOLOGICAL TAXONOMIC CRITERIA AND ANALYTICAL CAVEATS

Caveats for identification and descriptions are given in italics.

Prickles.—Whereas a majority of species either lack prickles or bear only small weak straight or recurved prickles, pronouncedly stout recurved prickles are inconsistently present (varying among herbarium collections and field populations) in the remaining species, notably *Lantana camara* subsp. *aculeata*, *L. hirsuta* subsp. *amazonica*, *L. horrida*, *L. nivea*, *L. planaltensis*, *L strigocamara*, *L. urticoides*, and *L. viscosa*. The tendency to produce prickles appears more pronounced in hybrids than in most indigenous species.

Trichomes.—The form of trichomes on the abaxial leaf surfaces (filiform vs. setiform vs. strigiform) and their length are highly correlated with ecological and geographic coherence of indigenous taxa and provides one of the main criteria to delimit series. *Trichomes in the adaxial grove of the midrib and some secondary veins can be nearly twice as long as those on the remaining tissue. Therefore measurements in the key and descriptions for adaxial hairs are taken between the secondary veins. Likewise, hairs on the nodal lines of the stems are often about twice as long as other hairs along the stem and are excluded from measurements in the key and descriptions.*

Filiform hairs and setae are both erect from the base with the setae differing primarily by greater length and stouter, and a more conical proximal portion. Both types may be somewhat flexuous, arching or curly distally.

Strigae are stiff conical hairs that are geniculately bent in the proximal quarter or third with the remaining distal portion directed antrorsely. On the adaxial leaf surfaces, the antrorse portion is more or less ascending and arching. The broadened base emerges from a buttressing ring of epidermal cells that form a pustulate base. Especially in Ser. *Strigosae* or taxa of hybrid origin with genes of its species, the strigae often are deciduous leaving the pustulate bases as rough points. In some species the bases enlarge with age and become vitreous (clear or white). In taxa and hybrids with strigae on the abaxial surface, the strigae lack the buttress base, arising directly from the epidermis and the antrorse portion is held more or less parallel to the epidermis. In some *Lantana nivea*, they are so short that the antrorse portion is not well developed, appearing as a short point angling upwards. *In recognizing the abaxial strigae, one must also be aware that filiform or setiform hairs that are crushed against the surface during pressing can be mistaken for strigae, which occur consistently over the pertinent surfaces.*

The co-occurrence on the abaxial surfaces of filiform hairs or setae with strigae is a clear indication of the hybrid nature or heritage of the specimen at hand.

The presence of stipitate glands on the twigs, peduncles, petioles, and even leaf-blades is variable within several taxa, noteably *Lantana camara* subsp. *portoricensis*, *L. horrida* subsp. *zanonii* and subsp. *tiliifolia*, *L. micrantha*, *L. paraensis*, and *L. planaltensis*. While glands are consistent in *L. leonardiorum* and *L. viscosa*, those species are not delimited on the basis of glands. Therefore, the consistent presence of glandular hairs in *L. camara* subsp. *glandulosissima* is not used to segregate it as a species; *L. camara* is simply variable in this regard.

Leaves.—The lateral halves of the blades usually are not mirror images, with the widest point in many taxa in the proximal third on one half and middle third on the other half, making it difficult to characterize

shape. Bases of the blades in almost all cases abruptly taper to a narrow wing onto the petiole distally. *Leaf-blades are considered to be triplinerved (as opposed to pinninerved) if the basal pair (or two pairs) of secondary veins are set at sharper angles than the more distal secondary veins, with the distance to the more distal veins greater than among them. Nigrescence refers to a distinct blackening of mature leaves occurring during drying for preservation, not normal senescence. While such blackening is diagnostic for certain species, newly emerging leaves can blacken in most species. Leaves atypical for size, shape, bases, apices, and venation are present on most plants. Leaf shape, size, and vestiture traits are measured only on fully developed, non-senescent leaves. Measurements for marginal teeth are taken mid-margin, avoiding the reduced teeth near the base and apices of the blades.*

Inflorescences.—The basic structure of the inflorescences has been discussed in detail (Sanders 2001). *Peduncle length in the key and descriptions are given for fully opened inflorescences and infructescences.*

Bracts generally decrease gradually in length and width from the proximal to the distal series that seemingly spiral up the receptacle. The distal (inner) bracts are about 2–4 mm long and about 0.3–1 mm wide in most species and, thus, are not detailed in the descriptions. The exceptions appear to be diagnostic in Ser. *Spicatae* and a few taxa in Ser. *Lantana* in which almost all the bracts are the same dimensions. In some taxa there is an abrupt diminution from the proximal (basal or outer) two or three series of bracts to the more distal series. Shape and size of the proximal bracts appear to be consistent and diagnostic, with the exception of *one or rarely two subfoliaceous bracts that develop sporatically in almost any taxon; hence, these atypical bracts are excluding from the measurements.*

Flowers.—Corolla color has been discussed by Sanders (2001, 2006). It often changes from bud to early opened flowers to late flowers to fading flowers, especially in plants that produce both yellow to carmin pigments and purplish pigments. The throat is often not only different but changes during flower maturation. This developmental variation is often further complicated by intraspecific variability. Unfortunately, detailed information is usually lacking from collection labels. Corolla shape is nearly uniform in the group, but size appears to be consistent within taxa when measured from fresh material. However, dried corollas are often shrivelled and difficult to measure; *in the descriptions, "fresh" size has been extrapolated from dried specimens.*

Cytology.—Chromosome numbers are not given in the descriptions because those for only a few taxa are known (See Sanders 1987a, 1987b, 1989).

Phenology.—Flowering time is not given in the descriptions because any species can flower anytime during the year whenever moisture is available. This is true even of species native of subtropical areas with frost seasons when the species are grown in frost-free areas.

TAXONOMIC TREATMENT

See Sanders (2001) and Sanders (2006) for further characterization of *Lantana* and comparison of sect. *Lantana* with other sections. Also, see Sanders (2006) for details of species typifications, which are supplemented here only as needed. Please note that, in the type and other specimen citations, the abbreviation "di" refers to a digital image made available online or as a courtesy by the cited herbarium. Many thousands of specimens representing this group are in herbaria awaiting identification. For this study only a small sample, primarily from major U.S. institutions, has been selected for annotation and citation here as these specimens will be most easily available for consultation by other professionals. Even so, annotations made during quick visits to herbaria may differ than those cited herein as a result of reflection and more careful study of digital images that I made or were sent to me. Selection of specimens was to establish only distribution limits of the species, as well as document as many hybrid combinations as possible, thus, resulting in a falsely apparent predominance of hybrids in some cases. To assist those attempting to identify specimens of sect. *Lantana*, a richly illustrated interactive key (in which vernacular names are also discussed and provided) has been made available online (Offutt & Sanders, 2012).

Lantana L. sect. **Lantana**

Shrubs or rarely treelets, erect to decumbent or subscandent, height (or length) (0.1–)0.5–3 m (to 4 or even 6 m in subscandent, especially aggressively naturalized forms); the internodes usually less than to almost twice as

long as leaves (mostly twice to thrice as long in *L. splendens*), with or without weak to stout, conical to recurved prickles; vestiture antrorsely strigose to puberulent, pilose, setose, glabrescent, or stipitate-glandular and thus markedly viscid, the trichomes of twigs, peduncles, and petioles often noticeably longer and stiffer than those on remaining herbage. **Leaves** opposite or sporadically ternate, petiolate, simple; blades usually ovate or lanceolate to elliptic, usually hardly to moderately rugose, i.e., puckered between tertiary veins (strongly so in some *L. horrida* and usually bullate in *L. leonardiorum*, which is puckered between the secondary veins), usually longitudinally flat or somewhat undulate (incurved in *L. depressa*); base attenuate to cordate; apex attenuate, acuminate, acute, obtuse, or occasionally rounded; margin usually finely serrate-crenate but coarsely so in *L. urticoides* and some *L. hirsuta* and *L. kingii* or subentire in some *L. cujabensis*, flat to revolute, usually green (often purple-tinged in *L. kingii*); adaxial surface strigose (strigae typically ascending distally to antrorsely bent, ± appressed in *L. kingii*, flaccid and strongly appressed in *L. hodgei*), strigose-villous, setose-villous, or nearly glabrous; abaxial surface strigose, pilose, puberulent, setose, or glabrescent, with the veins green to pale brown or sometimes nigrescent or occasionally tinged with purple (frequently purplish in *L. kingii*). **Inflorescences** pedunculate, capituliform spikes, one (or sporadically two in several species) per subtending leaf; peduncles about a third to twice the length of leaves (up to four times in some *L. horrida*); *axis (common receptacle) ellipsoid or fusiform, spongy*; bracts nearly always subtending a flower, linear triangular or linear lanceolate to oblong, elliptic, or spatulate, ± appressed to spreading or reflexed. **Flowers** in several series, two to three series in anthesis at a time, zygomorphic; corolla salverform with inflexed tube and four unequal lobes, pigments either yellow to reddish or pink to purple or admixtures of both (in hybrids or taxa of hybrid origin) or lacking. **Drupes** *usually blue-black* (but sporadically described by collectors as dark violet-purple), usually with a metallic iridescence; *pulp watery-mealy; endocarp turbinate-obpyriform with an inflated commissure and external circumferential ridge below the seed chambers*. **x**=11.

KEY TO SPECIES OF *LANTANA* SECT. *LANTANA*

BEFORE ATTEMPTING TO USE THE IDENTIFICATION KEY OR DESCRIPTIONS, SEE CAVEATS ABOVE.

1. Abaxial leaf-surface antrorsely strigose-scabrous to nearly glabrous, consisting only of or strongly dominated by strigae.
   2. Proximal bracts 2–8 mm wide, with 5–7 veins from the base.
      3. Capitula not elongating by prolonged initiation of additional flowers, remaining hemispheric; bracts ± obtuse, acute and rounded at very tip, or briefly acuminate, appressed to spreading, appearing to form an involucre; cilia, if present on bracts, usually no more than 0.5 mm; corollas yellow or orange aging reddish (rarely intensely reddish purple) _____ **13. L. cujabensis**
      3. Capitula elongating by prolonged initiation of additional flowers, becoming cylindric; bracts acuminate with a prolonged tip, spreading, causing the capitula to resemble spikes of *Carex lupulina*; cilia usually well developed on bracts, mostly 0.5–1 mm; corollas pink to purple or white aging purplish (rarely yellow to red-orange) _____ **19. L. paraensis**
   2. Proximal bracts 0.5–1.5 mm wide (to 3 mm in *L. ovatifolia* and *L. kingii*, otherwise rarely one or two bracts in outermost series spatulate-subfoliaceous to about 2 mm wide), with 3 veins (rarely 4 or 5 in *L. splendens*) from the base.
      4. Leaf-blades ovate-elliptic to lanceolate-elliptic or trullate, averaging 1.7–2.5(–3) times longer than wide, the base attenuately tapering to petiole from middle or just below middle, or less commonly abruptly contracted and broadly cuneate onto petiole; blades triplinerved; herbage usually nigrescent (except in *L. kingii* and *L. splendens*); upper leaf-surface usually lustrous.
         5. Proximal bracts (excluding one or two subfoliar outermost ones or those of gall-transformed heads) widest near or just below middle or in distal half (sometimes so in *L. splendens*, see below), persistent in fruit.
            6. Leaf-blades bright, dark, or dull green abaxially, nigrescent, ovate-elliptic, induplicate or having halves incurved at maturity; larger strigae of the abaxial leaf-surface 0.5–1 mm; twigs setulose with spreading hairs about 0.5–1.5 mm; proximal bracts ca. 3–5 mm, elliptic-lanceolate _____ **9. L. depressa**
            6. Leaf-blades distinctly whitish or pale green below (though not glaucous), not nigrescent, usually ovate or ovate-triangular, rarely (especially if less than 2 cm long) obovate or ovate-elliptic, ± flat, not having halves incurved at maturity; larger strigae of the abaxial leaf-surface 0.1–0.4(–0.6) mm; twigs glabrescent with antrorse hairs 0.3–0.7 mm; proximal bracts ca. 6–10 mm long, spatulate or oblanceolate _____ **10. L. kingii**
         5. Proximal bracts (excluding one or two subfoliar outermost ones or those of gall-transformed heads) widest at or just above base, deciduous after flowering.
            7. Corollas white aging bluish to pink, or pink aging light purple, or with purple intermixed with creamy yellow to orange; hairs of abaxial leaf-surface moderately dense, ca. 15–60/mm^2 (under 10X magnification those on the higher order veins may be so small as to appear to be papillae); abaxial surface of leaf-blade not noticeably whitish-green; stems often with abundant, stout, recurved prickles _____ **12. L. nivea**
            7. Corollas yellow to reddish orange without any pink or purple mixed in; hairs of abaxial leaf-surface moder-

ately to very sparse, ca. 0–12/mm^2 (under 10X magnification those on the higher order veins do not appear to be papillae); abaxial surface of leaf-blade whitish-green (but not glaucous); stems usually lacking stout, recurved prickles.

8. Leaf-blades mostly 1–5(–7) cm long, on adaxial surface of mature and older leaves the circular bases of strigae 0.3–0.5 or more mm in diam., conspicuously vitreous-pustulate, often nearly filling whole areole; corolla tubes ca. 5–8 mm long; proximal bracts mostly oblong-lanceolate (outermost 1 or 2 oblong-obovate or oblanceolate), 2–4(–5) mm long; virgate or divaricately branched shrubs _____ **7. L. splendens**

8. Leaf-blades mostly 5–15 cm long, on adaxial surface the circular bases of strigae usually 0.2 mm or less in diam. (not exceeding 0.3 mm.), usually not conspicuously vitreous-pustulate, not filling whole areole; corolla tubes 7–12 mm long; proximal bracts narrowly lanceolate to linear-triangular, 4–10 mm long; rounded, lax, or subscandent shrubs.

9. Leaf-blades glabrescent, smooth and subsucculent or coriaceous; hairs of adaxial leaf-surface geniculately bent at very base, flaccid, strongly appressed to surface and often deciduous; peduncles a third or less as long as leaves _____ **8. L. hodgei**

9. Leaf-blades strigose or scabrous, papery to subcoriaceous; hairs of adaxial leaf-surfaces geniculately bent about ¼ of length above base and held above surface; peduncles about equaling to half as long as leaves _____ **6. L. scabrida**

4. Leaf-blades ovate to broadly ovate, averaging 1–1.7 times longer than wide, the base rounded, truncate, or cordate, usually briefly and narrowly cuneate onto petiole at very base of blade; blades pinninerved; herbage usually not nigrescent (if so, then only the young, expanding leaves); upper leaf-surface lustrous or not.

10. Adaxial leaf-surface dull, not vitreous-pustulate, the bases of the strigae only about 0.1–0.2 mm in diam.; bracts deciduous after anthesis, the proximal series lanceolate-triangular or lanceolate-linear (occasionally an outermost one or two spatulate-subfoliar); corollas opening yellow, cream, or white aging yellow to red-orange, purplish, orange plus purple, or white with yellow throat _____ **20. L. strigocamara**

10. Adaxial leaf-surface lustrous, vitreous-pustulate or pustulate-scabridulous, the bases of the strigae (at least on the older leaves) about 0.3–0.5 mm or more in diam.; bracts persistent into fruit, the proximal series typically spatulate to elliptic-oblong; corollas yellowish to orange or red-orange.

11. Hairs on adaxial leaf-surface mostly 0.1–0.4 mm, appressed, often deciduous leaving only pustulate bases; leaf-blades abaxially distinctly whitish or pale green (seemingly but not actually glaucous); leaf-teeth sinuses 1–2.5 mm deep; stems upright; corollas opening yellow aging orange or red-orange _____ **10. L. kingii**

11. Hairs on adaxial leaf-surface 0.2–1 mm, ascending, longer ones sometimes deciduous; leaf-blades abaxially bright, dark or dull green; leaf-teeth sinuses 0.7–1.5 mm deep; stems trailing or decumbent; corollas opening and ± remaining yellow _____ **11. L. ovatifolia**

1. Abaxial leaf-surface not exclusively or dominantly antrorsely strigose-scabrous but setose, pilose, velutinous, puberulent, pannose, viscid, or glabrescent, the vestiture varying from having hairs that are exclusively erect (± erect from basal insertion, spreading from surface of lamina or vein from which they arise, filiform or setaceous, gland-tipped or not, distally arching-curved or flexuously curled) without strigae present to having a codominant mixture of erect hairs and strigae (occurs in hybrids and some species of hybrid origin).

12. Capitula elongating, becoming cylindric; corollas usually pink to deep reddish purple (sometimes pale yellow in throat only), occasionally white becoming infused with purple (rarely yellow to orange red in *L. paraensis*).

13. Corolla tubes briefly or not exerted beyond bracts, 2–4 mm; capitula elongating by expansion of nodes between flowers/fruits; bracts often deciduous after flowering, but if persisting, then usually rapidly becoming reflexed from base, without cilia, abaxial hairs 0.3–0.5 mm, apex acute to rounded, sometimes abruptly acuminate or briefly attenuate _____ **15. L. micrantha**

13. Corolla tubes exerted well beyond bracts, (5–)7–12 mm; capitula elongating by prolonged initiation of flowers; bracts strongly persisting and spreading in fruit, with cilia or also abaxial hairs (0.5–)0.7–1.5 mm, apex acuminate with prolonged tip.

14. Hairs of leaf-surfaces 30–150/mm^2, longest ones 1–1.5 mm or more; twigs and peduncles densely stipitate-glandular with scattered setae _____ **14. L. viscosa**

14. Hairs of leaf-surfaces 3–20/mm^2, longest ones 0.3–0.7 (rarely to 1.2) mm; twigs and peduncles glabrescent to thinly setulose, sometimes with scattered stipitate glands _____ **19. L. paraensis**

12. Capitula not elongating, remaining hemispheric; corollas usually opening yellow or orange aging orange or red-orange (sometimes opening creamy white or pure white and/or becoming infused with pink or purple in *L. planaltensis*, or rarely opening white and remaining so).

15. Leaves-blades distinctly triplinerved, usually nigrescent; adaxial leaf-surface often lustrous; abaxial surface often with strigae mixed with filiform hairs (can be covered over by the latter).

16. Leaf-blades mostly 2–5 cm long, mostly ovate-triangular or lanceolate-triangular with straight tapering sides from proximal ⅓ (sometimes contracted to abruptly acute or obtuse apex); adaxial surface usually noticeably lustrous and vitreous-pustulate, with the hair bases 0.3–0.5 mm diam., thinly scabrous, the strigae 2–10/mm^2, about 0.3 mm or less giving the surface a sandpapery texture; abaxial surface with soft, straight hairs restricted to crevices between the leaf-surface and the midrib (or also secondary veins) _____ **16. L. bahamensis**

16. Leaf-blades mostly 5–10 cm long, ovate, lanceolate or ovate-elliptic with curved sides and usually acuminate apex; adaxial surface lustrous or not, usually not pustulate, with the hair bases less than 0.3 mm diam., strigose-pilose, the hairs 20–80/ mm^2 or more, of mixed length up to 0.7 mm; abaxial surface with even vestiture of soft, straight hairs on surfaces of midrib to higher order veins or also areole tissue _____ **17. L. planaltensis**

15. Leaves-blades pinninerved, not distinctly nigrescent (except in some *L. urticoides*); adaxial surface dull (except somewhat lustrous in some *L. urticoides*); abaxial surface lacking strigae (except in many interspecific hybrids), exclusively of filiform, glandular, or setiform hairs.
    17. Leaves 1–1.5 times longer than wide, ± rotund, deltate or broadly ovate with conspicuous spreading acute teeth, the sinuses mostly 2–5 mm deep; adaxial leaf-surface, at least on older leaves noticeably vitreous-pustulate, the bases of the strigae mostly 0.3–0.5 mm in diam; abaxial leaf-surface with long setaceous hairs restricted to the midrib and secondary veins, these gradually reduced in length from base of midrib (where 1.5–2 mm long) toward margin (on midrib and secondary veins to ca. 0.7 mm long), shortest hairs (0.2–0.5 mm long) restricted to veinlets and areoles; proximal bracts mostly 7–12 mm long, oblanceolate or spatulate, mostly 1.5–3 mm wide, widest in distal half or near middle, conspicuously persistent and reflexed in fruit _____ **18. L. urticoides**
    17. Leaves mostly 1.5–2.5 times longer than wide (if less than 1.5, then lacking character combination of lead 17'), ovate, oblong-deltate, elliptic, or lanceolate with rounded or appressed-acute teeth, the sinuses mostly 0.3–2 mm deep (to 3 mm in some *L. hirsuta* subsp. *hirsuta*); adaxial leaf-surface not vitreous-pustulate (except in some *L. camara* subsp. *aculeata*), the bases of the strigae 0.1–0.2(–0.3) mm in diam.; abaxial leaf-surface with hairs all about the same length (either long setaceous hairs only on veins or short soft hairs on veins and areoles; longer hairs scattered among shorter hairs on midrib in some *L. horrida* and some *L. hirsuta*, but not in pattern of *L. urticoides*); proximal bracts mostly 2–10 mm long, linear-lanceolate (rarely linear-spatulate), lanceolate- or elliptic-oblong, mostly 0.5–1.5 mm wide, widest in proximal third (if oblanceolate- or obovate-spatulate and widest above middle, then mostly 2–6 mm long), deciduous or persistent (then sometimes reflexed) in fruit.
        18. Hairs of abaxial leaf-surface setiform, ca. 0.7–1.5 mm, straight and erect, sinuous, or antrorsely arching, restricted mostly to midrib, secondary, and tertiary veins, without sparse understory of shorter (0.1–0.5 mm), softer filiform hairs; adaxial surface setose to villous dominated by antrorse setaceous hairs 1–2 mm between the secondary veins, sometimes these also accompanied by an understory of shorter hairs; young twigs (also petioles and peduncles) with spreading hairs (1.2–)1.5–2.5 mm.
            19. Young twigs and peduncles usually viscid and sparsely setose, dominated by dense, conspicuous, stipitate glands to ca. 0.5 mm; proximal bracts mostly 4–6 mm long, oblong-elliptic or -lanceolate, covered with hairs ca. 1 mm and usually marginally ciliate with hairs (1–)1.5–2 mm _____ **5. L. insularis**
            19. Young twigs and peduncles sparsely to moderately setose, stipitate glands lacking (except in interspecific hybrids); proximal bracts mostly 5–10 mm long, linear-lanceolate or linear-spatulate, covered with hairs 0.3–1 mm, marginally ciliate with hairs 0.8–1(–1.5) mm or these lacking _____ **4. L. hirsuta**
        18. Hairs of abaxial leaf-surface weak and filiform, 0.1–0.5 mm (sometimes in *L. horrida*, scattered arching hairs on midrib to 1 mm among shorter hairs), spreading to curled, usually occurring on all vein orders including veinlets and areoles, occasionally deciduous and persisting only in crevices between major veins and leaf-surface; adaxial surface antrorsely strigillose to strigose villous with a covering of hairs of mixed length, these mostly 0.1–0.9 mm; young twigs (also petioles and peduncles) with spreading to appressed hairs only 0.1–1 mm (to 1.5 mm in some *L. horrida* subsp. *tilifolia*).
            20. Adaxial leaf-surface with a canopy of hairs between secondary veins only 0.2–0.5 mm (in *L. camara* subsp. *aculeata* sparsely scattered hairs to 0.7 mm may occur), usually in the form of strigae or stalked glands; peduncles typically about a third the length of to about equaling their subtending leaves (up to twice as long in *L. camara* subsp. *glandulosissima*) _____ **1. L. camara**
            20. Adaxial leaf-surface with a moderately dense canopy of hairs between secondary veins mostly 0.7–0.8(–1) mm, in the form of arching or flexible setae, often with a well developed understory of shorter (≤ 0.5 mm) strigae, filiform hairs or stalked glands; peduncles typically longer to 3 times longer than subtending leaves.
                21. Plants erect or trailing, laxly or openly branched, leaf-blades ovate to broadly elliptic to lanceolate-deltate, mostly 1–2 times longer than wide; teeth usually (6–)10–35 per side _____ **2. L. horrida**
                21. Plants erect, low and stiffly, densely branched; leaf-blades narrowly triangular to narrowly elliptic, mostly 2–3 times longer than wide; teeth usually 3–6 per side _____ **3. L. leonardiorum**

SPECIES OF PRESUMED DIVERGENT ORIGIN

A. Lantana sect. **Lantana** series **Lantana.** TYPE: *Lantana camara* L.

Adaxial leaf surfaces strigose-villosulous, the hairs less than 1.0 mm; abaxial leaf surfaces pilose, often densely so, the hairs occurring on veins and non-innervated tissue, filiform, 0.1–05 mm. **Inflorescences** arrested and remaining hemispheric, prolate-globose in fruit.

1. Lantana camara L., Sp. Pl. 627. 1753. *Camara vulgaris* Benth., Bot. Voy. Sulphur 154. 1846. TYPE (See Sanders 2006): cult., probably Hort. Uppsala, *Herb. Linnaeus 783.4* (LECTOTYPE: LINN!).

Shrubs erect or rounded, open; stems 0.5–3 m; branches ascending and several; twigs, peduncles and often petioles puberulent, pilose, setulose, stipitate-glandular, or glabrescent, the hairs 0.1–0.5(–1) mm. **Leaf-blades**

broadly ovate or oblong-deltate to elliptic-lanceolate, (1–)3–8(–16) cm long, the length (0.9–)1.5–2.5 × width, usually not nigrescent, papery, pinninerved; base subcordate, truncate, rounded or broadly cuneate, usually very briefly, narrowly cuneate onto petiole at very base; apex acute to acuminate, occasionally attenuate or rounded; marginal teeth 6–35(–50) per side, rounded to acute, spreading to appressed, sometimes with tips recurved, with sinuses 0.2–2 mm deep; adaxial surface dull, antrorsely strigillose to strigose-pilose or with stipitate glands mixed in, the hairs occurring on veins and intervening tissue, thin canopy of hairs only 0.2–0.5 mm (occasional hairs 0.7 mm in subsp. *aculeata*) with understory of shorter hairs not well developed, 10–90(–120)/sq. mm, not noticeably vitreous-pustulate (except in some subsp. *aculeata*), the circular bases of the strigae ca. 0.1–0.2(–0.3) mm in diam.; abaxial surface duller green than adaxial surface, moderately densely (occasionally sparsely) pilose, the hairs on all veins and intervening tissue, 0.2–0.5 mm, all about same length, (10–)40–250/sq. mm. **Inflorescences** remaining hemispheric; peduncles 0.3–2 × leaf length. **Proximal bracts** linear-lanceolate or ovate-elliptic to obovate, 2–8(–10) mm long, 0.5–1.5(–2) mm wide, widest near base to above middle, with 3 veins from the base, appressed or spreading, deciduous after flowering; apex attenuate to rounded; indument pilose to strigillose, sometimes stipitate-glandular, somewhat or not ciliate, the longest hairs ≤ 0.5 mm. **Corolla** yellow to or aging reddish orange (infused with pink or purple in subsp. *aculeata*), rarely white; corolla tube 4–12 mm.

Distribution and habitat.—Mexico, Central America, West Indies, and northern South America; cultivated and escaped pantropically, especially in Australia; disturbance openings in tropical evergreen and deciduous forest, open pine forest, thorn shrubland, savanna; 0–2000 m.

KEY TO SUBSPECIES OF *LANTANA CAMARA*

1 Twigs, petioles, and peduncles densely stipitate-glandular and adaxial leaf surfaces with stipitate glands mixed with eglandular trichomes _____ **e. subsp. glandulosissima**

1 Twigs, petioles, and peduncles without or occasionally with scattered stipitate glands but not densely and predominantly so and adaxial leaf surfaces without glandular trichomes.

2 Corollas with admixture of yellowish or orange pigments with rose or purplish pigments or opening yellowish and aging to purplish, or all corollas pink to deep reddish purple; stems often with stout, recurved prickles (subspecies of complex hybrid origin, variable for characters that differentiate among other subspecies; plants with only yellow or orange pigments that do not fit the remaining subspecies should be placed here) _____ **f. subsp. aculeata**

2 Corollas yellow to reddish orange (rarely white) without admixture of rose or purple pigments; stems usually lacking stout, recurved prickles but weak, ± straight ones sometimes developed.

3 Inflorescence bracts with all series about 2–4 mm long or only the proximal series 5–6 mm long and distal series abruptly shortened to about half that length; corolla tubes mostly 4–8 mm long in well pressed or fresh flowers.

4 Inflorescence bracts consistently ovate to obovate, broadest near or above middle; leaf-blades mostly 3–8 cm long, finely serrate-crenate with mostly 15–30 appressed teeth per side, the teeth sinuses usually 0.2–0.7 mm deep (if leaf smaller with fewer teeth, then teeth very small); twigs and peduncles without stipitate glands mixed among the eglandular hairs _____ **a. subsp. camara**

4 Inflorescence bracts mostly lanceolate-linear to triangular-oblong, broadest near the base; leaf-blades mostly 1–3 cm long, rather coarsely serrate-dentate (for their size) with 6–12(–15) spreading teeth per side, the teeth sinuses usually 0.7–1.5 mm deep; twigs and peduncles often with stipitate glands mixed among the eglandular hairs _____ **b. subsp. portoricensis**

3 Inflorescence bracts with proximal series usually 5–10 mm long and gradually shortened to distalmost series; corolla-tubes mostly 8–12 mm long in well pressed or fresh flowers.

5 Young stems and peduncles hispid with spreading or retorse, stiff setae 0.5–1 mm long (peduncles sometimes with stipitate glands mixed in); margins of leaves with teeth mostly fewer than 20 per side, the sinuses usually nearly 1 mm or more deep; dominant hairs of adaxial leaf surface ca. 0.5 mm _____ **c. subsp. moldenkei**

5 Young stems and peduncles puberulent with ascending soft hairs 0.1–0.5 mm long (mostly 0.3 mm); margins of leaves with teeth mostly 20–35 per side, the sinuses about 0.5 mm deep; dominant hairs of adaxial leaf surface ca. 0.3 mm or less _____ **d. subsp. moritziana**

1a. Lantana camara subsp. **camara.** *Camara aculeata* (L.) Kuntze var. *subinermis* Kuntze, Revis. Gen. Pl. 2:503. 1891. *Lantana aculeata* L. var. *subinermis* (Kuntze) Voss, Vilm. Blumengärtn. ed.3, 1:823. 1894.

Lantana urticifolia Mill., Gard. Dict. ed. 8, Lantana 5. 1768. *Lantana camara* L. f. *urticifolia* (Mill.) I.E. Méndez, Willdenowia 32:295. 2002 (misapplied to *L. camara* subsp. *aculeata*). TYPE: MEXICO. VERACRUZ: Veracruz, 1731, *Houstoun s.n., Herb. Sloan 6:84* (LECTOTYPE: BM-SL[di!]).

Lantana crocea Jacq., Pl. Hort. Schoenbr. 4:t.473. 1804. *Camara aculeata* (L.) Kuntze [var. *subinermis* Kuntze] f. *crocea* (Jacq.) Kuntze,

Revis. Gen. Pl. 2:503. 1891. *Lantana aculeata* L. f. *crocea* (Jacq.) Voss, Vilm. Blumengärtn. ed.3, 1:823. 1894. *Lantana camara* L. var. *crocea* (Jacq.) L.H. Bailey, Cycl. Amer. Hort. [L.H.Bailey] 884. 1900. LECTOTYPE: icon in Jacq., Pl. Hort. Schoenbr. 4:t.473. 1804.

Lantana formosa K. Koch & Fintelmann, Wochenschr. Gärtnerei Pflanzenk. 1:322. 1858. nom. illeg. TYPE: Unknown.

Camara aculeata (L.) Kuntze f. *obtusifolia* Kuntze, Revis. Gen. Pl. 3:250. 1893. TYPE: ARGENTINA: Buenos Aires, *Hauthal 627* (LECTOTYPE: not designated, no material located at NY]).

Stems usually without prickles or with few weak, straight ones; twigs, peduncles and often petioles moderately to densely covered with antrorse to ascending, curled or straight filiform hairs, the hairs 0.1–0.5 mm. **Leaf-blades** ovate or ovate-triangular to lanceolate-triangular or elliptic-lanceolate, widest near base, near proximal third, or just below middle, (1–)3–8(–10) cm long, the length (1.2–)1.5–2.5 × width; marginal teeth (9–)15–35 per side (if leaf smaller with fewer teeth, then teeth very small), rounded or obtuse, usually appressed or only with tips spreading, with sinuses 0.2–0.7(–1.2) mm deep; adaxial surface antrorsely strigillose to strigose-pilose, the hairs 0.1–0.5 mm. **Peduncles** 0.5–1.2 × leaf length. **Bract series** all similar or proximal series almost twice the length of distal series; proximal bracts obovate to oblanceolate, ovate-ellliptic, or oblong, 2–4 or 5–6 mm long, 0.8–1.5(–2) mm wide, widest near or above middle; apex often obtuse to rounded, sometimes acute (rarely acuminate). **Corolla** yellow to or aging reddish orange; corolla tube 5–8 mm; corolla limb 4–7 mm in diam.

Distribution and habitat.—West Indies (Cuba, Jamaica, Hispaniola, Caymen Is., Bahama Is.), Gulf and Caribbean coast and foot hills of Mexico from Veracruz south to Nicaragua; thorn and sclerophyll shrubland/woodland, thickets, and pine woodland on thin calcareous soils; 0–400 m.

See comments under *Lantana camara* subsp. *glandulosissima* and in Sanders (2006).

Selected specimens examined: **BAHAMA ARCHIPELAGO. Acklins Island:** *Brace 4418* (NY). **CAYMAN ISLANDS. Grand Cayman:** *Correll & Correll 50996* (FTG, NY). **CUBA. Guantánamo:** *Britton & Cowell 12782* (NY). **Isla de la Juventud (Isle of Pines):** *Britton & Wilson 14818* (NY). **Pinar del Río:** *León et al. 19689*, possibly hybridized (NY). **DOMINICAN REPUBLIC. Azua:** *Mejia 145* (NY). **GUATEMALA. Sacatepéquez:** *Breedlove 11408*, possibly with genes of *L. scabrida* (LL[di]). **HAITI. Ouest:** *Leonard 418* (NY). **JAMAICA. St. Andrew:** *Clute 12* (NY); *Harris 10103* (NY); *Katsuro 167A* (TEX[di]); *Maxon & Killip 405* (NY); *Smith Jam. 4* (LL[di], NY); *Yuncker 17043* (NY). **St. Catherine:** *Yuncker 17352* (NY). **St. Thomas:** *Proctor 18266* (NY). **MEXICO. Veracruz:** *Martinez 168*, some images appear to have extra long hairs but these may be overlapping hairs (F, LL[di], MO[di]). **NICARAGUA. Masaya:** *Araquistain 213* (LL[di]).

Presumed hybrids with: **2a. L. horrida subsp. horrida. CUBA. Havana:** *León 2431* (NY). **2bi. L. horrida subsp. zanonii var. sargentii. CUBA. Guantánamo:** *Hioram 4845* (NY). **JAMAICA. St. Catherine:** *Smith Jam. 38* (LL[di]). **6. L. scabrida. CUBA. Matanzas:** *Beagel 158* (NY). **Pinar del Río:** *Shafer & Leon 13640* (NY); *Alain 2850* (NY); *Britton & Earle 6563* (NY). **Santiago de Cuba:** *Britton 2306* (NY). **Villa Clara:** *Britton et al. 5901* (NY). **DOMINICAN REPUBLIC. Peravia:** *Zanoni et al. 18065*, or alternatively × *L. strigocamara* (NY). **JAMAICA.** (locality not recorded.) *Harris & Britton s.n.* (K). **St. Andrew:** *Baars Lc1* (BRIT). **St. Ann:** *Kessler 3553* (VDB). **St. Elizabeth:** *Perraton 23* (NY). **Trelawny:** *Guilding s.n. 1822* (K). **MEXICO. Campeche:** *Krauss 250* (LL[di]). **Chiapas:** *Croat 40345* (LL[di]). **Veracruz:** *Gomez-Pompa 4019* (GH[di]). **NICARAGUA. León:** *Moreno 2304* (LL[di]). **7. L. splendens. BAHAMA ARCHIPELAGO. San Salvador:** *Correll 43825*, alternatively × *L. bahamensis* (FTG, NY). **9i-cv×20. L. Callowiana Hybrid Group cultivars (L. depressa–tetraploid × strigocamara). BAHAMA ARCHIPELAGO. Eleuthera:** *Correll & Hill 45204* (FTG, LL[di]). **10. L. kingii. MEXICO. Veracruz:** *Greenman 58*, alternatively × *L. strigocamara* (F, GH); *Greenman 88* (F, GH[di]); *Moreno et al. 1516*, alternatively × *L.* Callowiana Hybrid Group cultivar (TEX[di]); *Smith Mex.47*, alternatively × *L. scabrida* or both *L. kingii* and *L. scabrida* (LL[di]). **16. L. bahamensis. BAHAMA ARCHIPELAGO. Eleuthera:** *Correll & Hill 45100* (FTG, NY); *Correll 45202* (FTG, NY). **East Caicos:** *Millspaugh & Millspaugh 9063* (NY). **North Caicos:** *Correll 43303* (FTG, NY). **20. L. strigocamara. BAHAMA ARCHIPELAGO. Great Abaco:** *Correll & Meyer 44538* (FTG, NY). **JAMAICA. St. Ann:** *s. coll. 532*, alternatively × *L. scabrida* (K). **NICARAGUA. Masaya:** *Araguistain 410*, alternatively × *L.* Callowiana Hybrid Group cv. (LL[di]). See also taxon **4a** and section on hybrid synonymy: **1a×6, 1a×16,** and **10×1a/1e?**

1b. Lantana camara subsp. **portoricensis** (Moldenke) R.W. Sanders, comb. & stat. nov. BASIONYM: *Lantana arida* Britton var. *portoricensis* Moldenke, Phytologia 50:214. 1982. *Lantana urticifolia* subsp. *portoricensis* (Moldenke) R.W. Sanders, Amer. J. Bot. 74:915. 1987. *Lantana camara* L. f. *portoricensis* (Moldenke) I.E. Méndez, Willdenowia 32:294. 2002 (as "portorricensis"). TYPE: PUERTO RICO: Cayey, 3 Oct 1885, *Sintenis 2379* (HOLOTYPE: US!; ISOTYPES: NY!, P[2,di!]).

Stems usually without prickles or with few weak, straight ones; twigs, peduncles and often petioles moderately to densely covered with antrorse to spreading, curled or straight hairs often with stipitate glands mixed in, the hairs 0.1–1 mm. **Leaf-blades** lanceolate-triangular to elliptic-lanceolate, or sometimes ovate triangular to broadly elliptic, widest near base, near proximal third, or just below middle, 1–3(–4.5) cm long, the length (1.2–)1.7–2.5 × width; marginal teeth 6–12(–15) (coarse for the size of the blade) per side, usually acute or obtuse, sometimes rounded, usually spreading, with sinuses (0.5–)0.7–1.5 mm deep; adaxial surface antrorsely

strigillose to strigose-pilose, the hairs 0.1–0.5 mm. **Peduncles** 1.2–2 × leaf length. **Bract series** all similar or proximal series almost twice the lenth of distal series; proximal bracts linear-lanceolate to triangular-oblong or oblanceolate-oblong, 2–4 or 5–6 mm long, 0.5–0.8(–1.3) mm wide, widest near the base or sometimes above middle; apex acute. **Corolla** yellow to or aging reddish orange; corolla tube 4–7 mm; corolla limb 4–7 mm in diam.

Distribution and habitat.—Puerto Rico (including Mona Island) and Virgin Islands; thorn and sclerophyll shrubland/woodland, thickets, and disturbance openings on thin calcareous soils, especially in karst topography; 0–600 m.

Selected specimens examined: **PUERTO RICO. Aibonito:** *Britton et al. 5874* (NY). **Coamo:** *Axelrod & Axelrod 3177* (UPRRP). **Mayaguez:** *Stimson 3085* (LL, NY). **Mona Island:** *Woodbury s.n. Apr 1977* (UPRRP). **Ponce:** *Axelrod & Axelrod 6579* (NY, UPRRP). **Sabana Grande.** *Spetzman & Diaz 168* (FTG).

Presumed hybrids with: **9i-cv×20. L. Callowiana Hybrid Group cultivars (L. depressa–tetraploid × strigocamara). PUERTO RICO. Dorado:** *Ackerman et al.1638* (NY). **20. L. strigocamara. PUERTO RICO. Salinas:** *Ross & Johnson SAN173* (BRIT).

1c. Lantana camara subsp. **moldenkei** (R.W. Sanders) R.W. Sanders, comb. nov. Basionym: *Lantana urticifolia* Mill. subsp. *moldenkei* R.W. Sanders, Moscosoa 5:202. 1989. Type: DOMINICAN REPUBLIC. Barahona: Paraíso, 23 Feb 1983, *Sanders et al. 1621* (holotype: JBSD!; isotypes: F!, FTG!, GH!, NY!, TEX!).

Stems usually without prickles or with few weak, straight or recurved ones; twigs, peduncles and often petioles moderately covered with spreading, antrorse, or retrorse, stiff or flexed setae or strigae, the hairs 0.5–1 mm, mostly ca. 0.8 mm. **Leaf-blades** broadly ovate or oblong-ovate to lanceolete, oblong-lanceolate or elliptic-lanceolate, sometimes distinctly constricted just distal to middle, widest mostly near proximal third, sometimes near base or near middle, (1–)3–8(–10) cm long, the length (0.9–)1.5–2.3 × width; marginal teeth 13–20(–25) per side, acute to obtuse, spreading or appressed, often with tips recurved, with sinuses 0.6–1.2(–2) mm deep; adaxial surface antrorsely strigillose to strigose-pilose, the hairs 0.1–0.5 (sometimes to 0.6) mm. **Peduncles** 0.3–0.9 × leaf length. **Bract series** gradually reduced in size; proximal bracts lanceolate, elliptic-lanceolate, triangular-lanceolate, oblong-lanceolate, or oblong, (3.5–)5–8 mm long, 1–1.5(–2) mm wide, widest near the base or proximal third, sometimes the outermost series slightly broader above middle (if 4 mm or less long, then widest near the base); apex acute or attenuate. **Corolla** yellow or yellow-orange aging reddish orange; corolla tube 7–12 mm; corolla limb 6–9 mm in diam.

Distribution and habitat.—Hispaniola and eastern Cuba; disturbance openings in tropical evergreen and deciduous forest, open pine forest, thorn shrubland, savanna; 0–1800 m.

Lantana camara subsp. *moldenkei* is enigmatic. The hispid twigs and sometimes longer hairs on the adaxial leaf surface suggest this subspecies may be a taxon that originated from hybrids between *L. camara* subsp. *camara* and *L. horrida*. Geographically the *L. horrida* parent should be subsp. *zanonii*, but *L. camara* subsp. *moldenkei* lacks stipitate glands. Sanders (1987b) demonstrated that subsp. *moldenkei* is widespread in Hispaniola and is uniformally tetraploid with normal segregation at meiosis, which is consistent with parentage from two closely related, probably diploid species. This might also explain the possible sympatry with *L. camara* subsp. *camara*. See further discussion and illustration in Sanders (1989).

Selected specimens examined: **CUBA. Holguín:** *Shafer 1199* (NY). **DOMINICAN REPUBLIC. Distrito Nacional:** *Dod & Zanoni 10047* (NY); *Zanoni 11614* (NY). **La Vega:** *Melo 100* (NY). **Peravia:** *Zanoni & Pimentel 25883* (NY). **Santiago:** *Zanoni 25967* (NY).

Presumed hybrids with: **2bi. L. horrida subsp. zanonii var. sargentii. DOMINICAN REPUBLIC. La Vega:** *Jiménez 8781* (LL[di]); *Mejía & Zanoni 5029* (NY). **Pedernales:** *Liogier & Liogier 23331* (NY). **2bii. L. horrida subsp. zanonii var. subcordata. DOMINICAN REPUBLIC. Santiago:** *Valeur 1002* (LL, NY). **3. L. leonardiorum. DOMINICAN REPUBLIC. Valverde:** *Liogier 11595* (NY). **12b. L. nivea subsp. mutabilis. CUBA. Holguín:** *Shafer 1548* (NY). **12b. L. strigocamara. DOMINICAN REPUBLIC. Barahona:** *Sanders 1623* (FTG, JBSD). **La Vega:** *Mejía et al. 10432* (NY).

1d. Lantana camara subsp. **moritziana** (Otto & A. Dietr.) R.W. Sanders, stat. nov. Basionym: *Lantana moritziana* Otto & A. Dietr., Allg. Gartenzeitung 9:369. 1841. *Lantana camara* L. var. *mortiziana* (Otto & A. Dietr.) López-Pal., Revista Fac. Farm. Univ. Andes 14:21. 1974. Type: VENEZUELA: Caracas, *Moritz 163* (lectotype: G[di!]; isotype: G[di!]).

Lantana armata Schauer f. *ternifolia* Moldenke, Phytologia 47:223. 1980. Type: VENEZUELA. Amazonas: confluence of Río Orinoco with Río Ventuaru, 4 May 1971, *Foldats 227-A* (holotype: NY!).

Stems usually without prickles or with few weak, straight ones; twigs, peduncles and often petioles moderately to densely covered with usually ascending, soft to somewhat stiff, curled or straight hairs, the hairs 0.1–0.5(–0.7) mm, mostly ca. 0.3 mm. **Leaf-blades** broadly ovate to oblong-deltate to elliptic lanceolate, widest usually in or near proximal third, sometimes near middle, (1.5–)3–7(–9) cm long, the length (1.1–)1.3–2 × width; marginal teeth 20–35(–50) per side, rounded, obtuse, or acute, often appressed, with sinuses 0.3–0.8(–1) mm deep; adaxial surface antrorsely strigillose to strigose-pilose, the hairs mostly about 0.3 mm or less. **Peduncles** 0.5–1.2 × leaf length. **Bract series** gradually reduced in size; proximal bracts linear-oblong, oblanceolate-oblong, linear-lanceolate, or linear-triangular, 4–8 mm long, 0.5–1.5 mm wide, widest near the base or the outermost series sometimes widest above middle (if 4 mm or less long, then widest near the base); apex acute to attenuate. **Corolla** yellow to or aging reddish orange; corolla tube 7–12 mm; corolla limb 6–9 mm in diam.

Distribution and habitat.—Southern Central America (Costa Rica, Panama), northern South America (Ecuador, Colombia, Venezuela, and the Guianas), and Lesser Antilles; disturbance openings in tropical evergreen and deciduous forest, shrubland, and savannas; 0–1800 m.

See comment under *Lantana camara* subsp. *glandulosissima*.

Selected specimens examined: **COLOMBIA. Antioquia:** *Barkley et al. 590* (NY). **Norte de Santander:** *López-Palacios 3594* (NY). **Valle del Cauca:** *Cuatrecasas 14456* (F). **ECUADOR. Tungurahua:** *Asplund 19924* (NY). **GUYANA. Pomeroon-Supenaam:** *De La Cruz 1054* (NY). **PANAMA. Panamá:** *Dwyer et al. 5095* (MO); *Garibaldi 111* (MO); *Jaén 36* (F); *Macbride 2601* (F). **VENEZUELA. Bolívar:** *Croizat 32* (F). **Lara:** *González & Campos L97* (LL). **Mérida:** *López-Palacios 2584* (LL). **Miranda:** *Ramírez 1090* (NY). **Trujillo:** *López-Palacios 2769* (LL).

Presumed hybrids with: **2a. L. horrida subsp. horrida. PANAMA. Colón:** *Witherspoon & Witherspoon 8352*, also × *L. scabrida*? (MO). **Los Santos:** *Croat 9731*, also × *L. strigocamara*? (MO). **Kuna Yala (San Blas):** *Kirkbride 183*, also × *L. scabrida*? (MO). **Veraguas:** *Rodrigues 75*, also × *L. scabrida*? (MO). **2c. L. horrida subsp. tiliifolia. COLOMBIA. Antioquia:** *Barkley et al. 17C410* (NY). **Huila:** *Bermúdez s.n. 21–26 Feb 1947* (F). **VENEZUELA. Mérida:** *Ruiz-Terán & López-Figueiras 106* (NY). **4a. L. hirsuta subsp. hirsuta. COSTA RICA. Guanacaste:** *Moldenke 1216* (LL). **4b. L. hirsuta subsp. amazonica. VENEZUELA. Nueva Esparta:** *Miller & Johnston 95* (F). **6. L. scabrida. COSTA RICA. Punarenas:** *Grant 91-01567* (US); *Burger et al. 4797* (NY). **GUYANA. Cuyuni-Mazaruni**: *De La Cruz 4223* (F). **Essequibo Islands-West Demerara:** *Dorsett et al. 34* (MO). **Mahaica-Berbice?:** *Persaud 169* (F). **Pomeroon-Supenaam:** *De La Cruz 2523* (MO). **PANAMA. Colón:** *Antonio 4786* (LL); *Lewis et al. 5371* (LL, MO); *Miller & Miller 908* (LL). **Veraguas:** *Knapp et al. 3355* (LL). **VENEZUELA. Zulia:** *Bunting et al. 7317*, alternatively × *L. nivea* subsp. *mutabilis* (LL[di]). **8. L. hodgei. LESSER ANTILLES. Saint Lucia:** *Beard 1015* (SMU). **9i-cv×20. L. Callowiana Hybrid Group cultivars (L. depressa–tetraploid × strigocamara). ECUADOR. Chimborazo:** cult., *Dodson & Dodson 11749* (LL). **13. L. cujabensis. ECUADOR. Guayas:** *Asplund 15327* (NY); *Asplund 16002*, alternatively × *L. nivea* subsp. *mutabilis* (NY); *Pearsall 66* (MO). **Los Ríos:** *Holm-Nielsen et al. 2745* (F). **19. L. paraensis. GUYANA. Cuyuni-Mazaruni:** *De La Cruz 2295* (NY). **20. L. strigocamara. VENEZUELA. Sucre:** *Sandoval 8*, alternatively × *L. scabrida* (SMU). See also section on hybrid synonymy: **1d×2c, 1d×6,** and **1d×12b.**

1e. **Lantana camara** subsp. **glandulosissima** (Hayek) R.W. Sanders, comb. & stat. nov.

Basionym: *Lantana glandulosissima* Hayek, Repert. Spec. Nov. Regni Veg. 2:161. 1906. Type: MEXICO. Jalisco: Tequila, 2 Jul 1893, *Pringle 4431* (holotype: W!; isotypes: BR, F!, MO!, NY!, P[2,di!]).

Lantana moritziana Otto & A. Dietr. f. *parvifolia* Moldenke, Phytologia 25:117. 1973. *Lantana camara* L. [var. *moritziana* (Otto & A. Dietr.) López-Pal.] f. *parvifolia* (Moldenke) López-Pal., Revista Fac. Farm. Univ. Andes 14:21. 1974. nom. illeg. [non Moldenke 1948] Type: VENEZUELA. Mérida: Tovar, 16 May 1971, *López-Palacios 2585* (holotype: LL!; isotype: MERF).

Lantana glandulosissima Hayek f. *albiflora* Moldenke, Phytologia 26:177. 1973. Type: GUATEMALA. Petén: Río Machaquila, 13 Mar 1970, *Contreras 9718* (holotype: LL!; isotype: LL!).

Lantana glandulosissima Hayek f. *flava* Moldenke, Phytologia 47:223. 1980. Type: MEXICO. Jalisco: Volcán Tequila, 25 Oct 1970, *Webster & Breckon 15971* (holotype: MEXU[di!]).

Stems usually without prickles or with few weak, straight to recurved ones; twigs, peduncles and often petioles densely covered with stipitate glands or also with eglandular filiform hairs mixed in, the hairs (and glands) 0.1–0.5 mm, mostly 0.2–0.3 mm. **Leaf-blades** broadly ovate or broadly elliptic to oblong-lanceoate or elliptic-lanceolate, widest usually near proximal third or middle, (1–)4–10(–16) cm long, the length (1.2–)1.5–2.1 × width; marginal teeth 10–30(–45) per side, usually rounded or obtuse, usually spreading, with sinuses (0.4–)0.7–1.5(–2) mm deep; adaxial surface mixed antrorsely strigillose to strigose-pilose and stipitate-glandular, the hairs 0.1–0.5 mm. **Peduncles** 0.5–1.8 × leaf length (often almost doubling in length in fruit). **Bract series** gradually reduced in size; proximal bracts oblanceolate-oblong (rarely obovate) to triangular-oblong or

linear-lanceolate, (2.5–)4–8 mm long, 0.8–1.7(–2) mm wide, widest above or near the middle or near the base; apex acute to attenuate, often rounded at very tip. **Corolla** yellow to or aging reddish orange, rarely white; corolla tube (5–)7–12 mm; corolla limb 6–9 mm in diam.

Distribution and habitat.—Mexico (northwestern, central, and southern) and Central America to northern Colombia and Venezuela; open pine-oak forest, thorn and tropical deciduous shrubland and woodland, and savanna, especially in disturbance openings; 0–2000 m.

Lantana camara subsp. *glandulosissima* differs from subsp. *camara* only in the strong development of stipitate glands in place of filiform hairs on twigs, peduncles, petioles, and leaf surfaces and in the longer bracts and corollas. Because the development of glandular hairs is variable within several other taxa in sect. *Lantana*, this trait is viewed as insufficient grounds for recognition at the species level. The two subspecies appear to be parapatric or narrowly sympatric in the vicinity of Veracruz (as evidenced by the intermediate or hybrid specimen, *Gilly et al. 75*, MSC), perhaps due to human activity. Although no specimens of subsp. *glandulosissima* from Veracruz came to my attention, interspecific hybrids (see section below) further evidence its presence there. Furthermore, at least in Bocas del Toro Prov., Panama, subsp. *glandulosissima* intergrades with subsp. *moritziana* (*Peterson & Annable 868*, MO).

Lantana camara subsp. *glandulosissima* is broadly sympatric with *L. horrida*. The two "pass the test of sympatry" (Stebbins 1966, p. 95–96) despite occasional hybrids that are probably limited to disturbed areas. I take this as evidence that *L. camara* and *L. horrida* are distinct. On the other hand, if one considered the differences in length of the adaxial leaf-surface trichomes an inadequate species criterion and submerged *L. horrida* within *L. camara*, then subsp. *glandulosissima* would need to be segregated as a distinct species.

Selected specimens examined: **COSTA RICA. Puntarenas:** *Beetle 26235* (US). **EL SALVADOR. San Vicente:** *Standley 21405* (US). **GUATEMALA. Alta Vera Paz:** *Cook & Griggs 653* (US). **Huehuetenango:** *Skutch 1595* (US). **MEXICO. Chiapas:** *Breedlove 10653* (US); *Reyes et al. 1830* (TEX). **Durango:** *Rose 3489* (US); *Tenorio et al. 6312* (TEX). **Guerrero:** *Rose et al. 9277* (SMU). **Jalisco:** *Iltis et al. 821* (US); *Jones 27364* (US). **Michoacán:** *Nelson 6946* (US). **Puebla:** *Day 12* (BRIT). **Sonora:** *Gentry 2234* (US). **NICARAGUA. Managua:** *Chaves 87* (US). **Masaya:** *Robbins 5547* (SMU[di]). **PANAMA. Veraguas:** *Croat 37033* (MO). **VENEZUELA. Aragua:** *Pittier 14001* (F); *Steyermark et al. 127693* (MO). **Bolívar:** *Wurdock & Monachino 39982* (F). **Distrito Capital:** *Elias 493* (F). **Zulia:** *Bunting 10721* (LL[di]).

Presumed hybrids with: **2a. L. horrida subsp. horrida. BELIZE. Corozal:** *Crane 544* (BRIT). **GUATEMALA. Huehuetenango:** *Williams et al. 22274* (US). **Sololá:** *Day 14* (BRIT). **MEXICO. Chiapas:** *Breedlove 26489*, also × *L. kingii* (LL[di]); *Ton 1596* (US). **Chihuahua:** *Caddell s.n.* (BRIT); *Goldman 199* (US). **Guerrero:** *Rose et al. 9429* (US); *Schwabe et al. s.n. 22 Oct 1978*, specimen Moldenke had intended to be holotype of *L. glandulosissima* f. *aculeatissima*, see section on hybrid synonymy 1e×2a (MEXU[di]). **Jalisco:** (LL[di]); *Day 7* (BRIT); *McVaugh 17246* (US); *Pérez 728*, also × *L. kingii* (LL[di]); *Pringle 4481* (NY); *Pringle 9354* (US); *Santana & Cevallos 4574*, alternatively × *L.* Callowiana Hybrid Group cv. (BRIT). **México:** *Hinton 6829* (US). **Michoacán:** *Arsène 6941* (US). **Morelos:** *Langman 3672* (US). **Oaxaca:** *King 1224*, also × *L. kingii*? (NY); *Kral 25277* (VDB); *Nelson 2072* (US). **Veracruz:** *Hernández 566* (MO[di]). **Zacatecas:** *Mahler 5803* (SMU). **NICARAGUA. Managua:** *Croat 43718* (US). **PANAMA. Chiriquí:** *Croat 33086* (MO). **Coclé:** *Burch et al. 1141* (MO); *Folsom 2901* (MO). **Colón:** *Knapp & Sytsma 2452*, also × *L. scabrida*? (MO); *Sullivan 598*, also × *L. scabrida*? (MO). **Kuna Yala (San Blas):** *Stier 1* (MO). **Panamá:** *Knapp 1229*, also × *L. scabrida*? (MO). **Veraguas:** *Rodriguez 67* (MO). **2c. L. horrida subsp. tiliifolia. VENEZUELA. Bolívar:** *Elcoro 790* (MO). **Trujillo:** *Bunting 9928* (LL[di]). **4a. L. hirsuta subsp. hirsuta. BELIZE. Belize:** *Arvigo et al. 340* (US). **Corozal:** *Crane 239* (BRIT). **COLOMBIA. Chocó:** *Forero 461* (MO). **GUATEMALA. Petén:** *Contreras 1781* (SMU); *Contreras 5471* (NY). **MEXICO. Guerrero:** *McCorcle & Rowell 3493* (SMU); *Rowell 2914* (SMU). **Morelos:** *Duncan 12* (BRIT[di]); *Harris 49* (SMU[di]). **Nayarit:** *Flores-Franco 3311* (TENN). **Yucatán:** *Stewart 523* (LL[di]). **PANAMA. Bocas del Toro:** *Wedel 187*, also × *L. scabrida*? (MO). **Chiriquí:** *Stern et al. 1159*, also × *L. scabrida*? (MO). **Colón:** *Hunter & Allen 746* (MO); *Piper 5975* (US); *Stern et al. 71* (MO). **Darién:** *Duke 4889* (LL[di]); *Stern et al. 624* (MO). **Kuna Yala (San Blas):** *Herrera 602*, also × *L. scabrida*? (MO). **Panamá:** *Miller 1048* (MO). **6. L. scabrida. COSTA RICA. Guanacaste:** *Liesner 2308* (F). **GUATEMALA. Chimaltenango:** *Day 2* (BRIT). **HONDURAS. Francisco Morazán:** *Moldenke & Moldenke 19810* (SMU[di]). **MEXICO. Veracruz:** *Baars Lc6* (BRIT). **NICARAGUA. Chinandega:** *Moreno 1528* (LL). **Granada:** *Moreno 2705* (LL[di]). **Madriz:** *Moreno 2808* (LL). **Managua:** *Sandino 273* (LL[di]). **PANAMA. Colón:** *Nowicke et al. 3590* (LL[di]). **Kuna Yala (San Blas):** *Stier 72* (MO). **VENEZUELA. Falcón:** *Bunting 9340* (LL[di]). **9i-cv×20. L. Callowiana Hybrid Group cultivars (L. depressa–tetraploid × strigocamara). MEXICO. Guerrero:** cult., *Krauss 947* (LL[di]). **Quitana Roo:** *Cabrera 4273*, alternatively × *L. depressa* var. *depressa*, escapted cv. (TEX[di]). **Veracruz:** *Day 26* (BRIT). **12b. L. nivea subsp. mutabilis. GUATEMALA. Petén:** *Contreras 9287*, alternatively × *L. camara* subsp. *aculeata* (US). **10. L. kingii. GUATEMALA. Sololá:** *Day 4* (BRIT). **MEXICO. Chihuahua:** *Bye 3416* (TEX[di]). **Durango:** *Ortega 4315* (US). **Jalisco:** *Lott 3943* (TEX[di]). **Morelos:** *Piper 53* (SMU[di]). **Nayarit:** *Maltby 81* (NY). **Oaxaca:** *Torres 8404* (TEX[di]). **Puebla:** *Dwyer 14309* (LL[di]). **Sonora:** *Felger 96-75* (BRIT). **Veracruz:** *Ahshpanek 668*, alternatively × *L.* Callowiana Hybrid Group cv. (TEX[di]). **20. L. strigocamara. MEXICO. Morelos:** *Thomas 60* (BRIT[di]). See also taxa **2a** and **4b** and section on hybrid synonymy: **1e×2a, 1e×2a×10, 1e×4a, 1e×10, 1e×10/20, 4a×10,** and **10×1a/1e?**

1f. Lantana camara subsp. **aculeata** (L.) R.W. Sanders, Sida 22:394. 2006. BASIONYM: *Lantana aculeata* L., Sp. Pl. 627. 1753. *Camara aculeata* (L.) Kuntze, Revis. Gen. Pl. 2:503. 1891. *Camara aculeata* (L.) Kuntze var. *normalis* Kuntze, Revis. Gen. Pl. 2:503. 1891. *Lantana aculeata* L. var. *normalis* (Kuntze) Voss, Vilm. Blumengärtn. ed.3, 1:823. 1894. *Lantana camara* L. var. *aculeata* (L.) Moldenke, Torreya 34:9. 1934. LECTOTYPE: icon in Plukenet, Phytographia t. 233, f.5. 1692.

Lantana sanguinea Medik., Hist. & Commentat. Acad. Elect. Sci. Theod.-Palat. 3. Phys. 229. 1775. *Camara aculeata* (L.) Kuntze [var. *subinermis* Kuntze] f. *sanguinea* (Medik.) Kuntze, Revis. Gen. Pl. 2:503. 1891. nom. illeg. (see synonyms below). *Lantana aculeata* L. f. *sanguinea* (Medik.) Voss, Vilm. Blumengärtn. ed.3, 1:823. 1894. *Lantana camara* L. var. *sanguinea* (Medik.) L.H. Bailey, Cycl. Amer. Hort. [L.H. Bailey] 884. 1900. *Lantana camara* L. f. *sanguinea* (Medik.) Moldenke, Phytologia 45:296. 1980. TYPE: Unknown.

Lantana mutabilis Salisb., Prodr. Stirp. Chap. Allerton. 107. 1796. nom. illeg. TYPE: None selected.

Lantana suaveolens Desf., Tabl. École Bot., ed. 3 (Cat. Pl. Horti Paris) 393. 1829. nom illeg. TYPE: Not determined.

Lantana coccinea C.E. Weigel, Physiogr. Salsk. Handl. 1:46. 1776. TYPE: Unknown.

Lantana coccinea Lodd. ex G. Don, Hort. Brit. [Loudon] 245. 1830. nom. nud. TYPE: Unknown.

Lantana variagata Otto & A. Dietr., Allg. Gartenzeitung 10:314. 1842. TYPE: Unknown.

Camara aculeata (L.) Kuntze [var. *subinermis* Kuntze] f. *varia* Kuntze, Revis. Gen. Pl. 2:503. 1891. *Lantana aculeata* L. f. *varia* (Kuntze) Voss, Vilm. Blumengärtn. ed.3, 1:823. 1894. *Lantana camara* L. f. *varia* (Kuntze) Moldenke, Phytologia 45:296. 1980. TYPE: JAVA: cult., Hort. Buitenzorg, (LECTOTYPE: not designated, no material located at NY).

Camara aculeata (L.) Kuntze [var. *normalis* Kuntze] f. *nivea* Kuntze, Revis. Gen. Pl. 2:503. 1891. nom. illeg. (see taxon 12a) TYPE: Unknown.

Camara aculeata (L.) Kuntze [var. *normalis* Kuntze] f. *mista* Kuntze, Revis. Gen. Pl. 2:503. 1891. nom. illeg. (see hybrid synonymy 1fx4) TYPE: Unknown.

Camara aculeata (L.) Kuntze [var. *normalis* Kuntze] f. *sanguinea* Kuntze, Revis. Gen. Pl. 2:503. 1891. nom. illeg. (see synonym *L. sanguinea* above). TYPE: JAVA: cult., Hort. Buitenzorg (LECTOTYPE: not designated, no material located at NY).

Stems usually with stout, recurved prickles, often abundant; twigs, peduncles and often petioles moderately covered with antrorse to ascending or retrorse, curled or straight hairs or also stipitate glands, the hairs 0.1–0.7 mm. **Leaf-blades** broadly ovate or oblong-deltate to elliptic lanceolate, widest usually in or near proximal third, sometimes near middle, 3–9 cm long, the length (1.1–)1.3–2 × width; marginal teeth 10–30(–45) per side, usually acute or obtuse, sometimes rounded, usually spreading, with sinuses 0.5–2 mm deep; adaxial surface antrorsely strigillose to strigose-pilose, the hairs 0.1 –0.5 mm (occasional ones to 0.7 mm). **Peduncles** 0.5–1.2 × leaf length. **Bract series** gradually reduced in size; proximal bracts linear-oblong, oblanceolate-oblong, linear-lanceolate, or linar-triangular, 4–8(–10) mm long, 0.5–1.5 mm wide, widest near the base or proximal third, sometimes the outermost one or two slightly broader above middle; apex usually attenuate. **Corolla** yellow to or aging red-orange and usually infused with purple or opening pink aging to deep reddish purple; corolla tube (5–)7–12 mm; corolla limb 6–10 mm in diam.

Distribution and habitat.—Historically cultivated worldwide and escaped pantropically, especially common in Africa and Australia; disturbance openings in tropical evegreen, deciduous, and thorn forest and savanna; 0–2000 m.

Selected specimens examined: **AUSTRALIA. Queensland:** *Day 8* (BRIT). **KENYA. Taita Taveta:** *Wakanene et al. 383* (MO). **ZAIRE. Haut-Katanga:** *Fabri 60415* (MO).

Presumed hybrids with: **9i-cv×20. L. Callowiana Hybrid Group cultivars (L. depressa–tetraploid × strigocamara). AUSTRALIA. Queensland:** *Day 64* (BRIT); *Riding 76* (BRIT); *Robazza & McAndrew 17* (BRIT). **12b. L. nivea subsp. mutabilis. AUSTRALIA. New South Wales:** *Day 38* (BRIT); *Day 42* (BRIT); *Day 71* (BRIT). **Queensland:** *Hannan-Jones 29* (BRIT); *McAndrew 48* (BRIT); *McAndrew 81* (BRIT); *McAndrew 84* (BRIT). **CHINA. Guangdong:** *Deng Lang 10459* (BRIT[di]). **RHODESIA. Guruve:** *Nyariri 167* (MO). **TANZANIA. Kilimanjaro:** *Mlangwa et al. 459* (BRIT). **Tanga:** *Mwangoka & Kayombo 113* (MO). **U.S.A. HAWAI'I. Oahu:** *Degener 11467*, identification uncertain (SMU). **NORTH CAROLINA. Forsyth Co.:** cult,. *Schallert 1352* (SMU). **20. L strigocamara. AUSTRALIA. Queensland:** *Day 69* (BRIT). **TANZANIA. Arusha:** *Kayombo 1495*, identification uncertain (BRIT). **Pwani:** *Kibure 26* (BRIT). **U.S.A. HAWAI'I. Kauai:** *Krauss 1013* (SMU). See also taxon **1e** and section on hybrid synonymy: **1f×2, 1f×4,** and **1f×C.**

2. Lantana horrida Kunth, Nov. Gen. Sp. [H.B.K.] 2:261. 1817. TYPE: MEXICO. DISTRITO FEDERAL: Chapultepeque, *Humboldt & Bonpland 4149* (LECTOTYPE: P-HBK, barcode P00307142[di!]).

Lantana antillana Raf., Sylva Tellur. 82. 1838. TYPE: Unknown.

Shrubs erect, rounded, lax, or trailing, dense to open; stems 0.5–3 m; branches ascending and normally several to decumbent and few; twigs, peduncles and often petioles puberulent, setose, glabrescent, or stipitate-glandular, the hairs 0.1–1.5 mm. **Leaf-blades** broadly ovate to rotund, elliptic or lanceolate-deltate, (0.5–)1–9(–

12) cm long, the length 1–2.2 × width, not nigrescent, papery, pinninerved; base usually rounded to truncate, sometimes broadly cuneate or cordate, briefly narrowly cuneate onto petiole at very base; apex acuminate, acute, obtuse, or rounded; marginal teeth (4–)6–25(–45) per side, acute, obtuse, or rounded, spreading or appressed, then sometimes with tips recurved, with sinuses 0.2–2.5 mm deep; adaxial surface dull, antrorsely strigose-velutinous or also stipitate-glandular, the hairs occurring on veins and intervening tissue, moderately dense canopy of hairs 0.6–0.8 (–1) mm with understory of hairs 0.2–0.5 mm, (5–)10–50(–150)/sq. mm, not noticeably vitreous-pustulate, the circular bases of the strigae ca. 0.1–0.2 mm in diam.; abaxial surface dull green, moderatly densely (occasionally sparsely) pilose, the hairs on all veins and intervening tissue, 0.3–0.5 mm, all about same length except for a few scattered arching hairs 0.7–1 mm on the midrib or secondary veins, 10–200/sq. mm. **Inflorescences** remaining hemispheric; peduncles (0.5–)0.8–4 × leaf length (usually about equalling to almost twice when mature). **Proximal bracts** lanceolate-triangular, lanceolate-linear or narrowly elliptic, narrowly oblanceolate, narrowly oblong to oblanceolate-spatulate, 2–12 mm long, 0.5–3 mm wide, widest in proximal, middle, or distal third, with 3(–5) veins from the base, appressed or spreading, persisting or not; apex acute, attenuate or obtuse to rounded; indument strigose-pilose or setose, often sessile- or stipitate-glandular, ciliate or not, the longest hairs mostly 0.3–1 mm. **Corolla** yellow to or aging reddish orange; corolla tube 4–12 mm.

Distribution and habitat.—Mexico and West Indies to subtropical South America; tropical savanna with gallery forest, montane humid, pine, or dry forest, and disturbed successional woodland, shrubland and grassland; 0–2500 m.

See also comments under *Lantana camara* subsp. *glandulosissima*.

KEY TO THE SUBSPECIES AND VARIETIES OF *LANTANA HORRIDA*

1. Twigs, peduncles, petioles, and upper leaf sufaces with stipitate glands lacking or with a few mixed among the eglandular hairs.
   2. Inflorescence bracts usually 0.5–1.5 mm wide, proximal series 5–10 mm long and gradually shorted to distalmost series that are 2–4 mm long, proximal bracts lanceolate, lanceolate-linear, narrowly elliptic, rarely narrowly obovate; apex attenuate _____ **a. subsp. horrida**
   2. Inflorescence bracts mostly 1.5–3 mm wide, either all series about 2–5 mm or only the proximal series 5–8 mm long and distal series abruptly shortened to 2–5 mm, proximal bracts ovate to elliptic; apex acute _____ **c. subsp. tiliifolia**
1. Twigs, peduncles, petioles, and/or upper leaf sufaces with stipitate glands densely mixed among or dominating the eglandular hairs.
   3. Inflorescence bracts mostly 1.5–3 mm wide; leaf-blades generally 4–9 cm long, varying from nearly rotund or broadly ovate with an abruptly acuminate apex to broadly rounded at base and sides tapering from wide base straight to prolonged acute apex; marginal teeth mostly 20–35 per side _____ **c. subsp. tiliifolia**
   3. Inflorescence bracts usually 0.5–1.5 mm wide; leaf-blades generally 0.5–4 cm long, ovate, oblong-triangular, ovate-elliptic or smallest ones rotund, apex rounded or abruptly acute; marginal teeth 6–20 per side _____ **4 (b. subsp. zanonii)**
      4. Central axis of plant more or less developed, plant erect with ascending branches; leaf-blades usually 2–4 cm long; marginal teeth sinuses about 1–2 mm deep; proximal bracts mostly longer than 5 cm, lanceolate, narrowly oblong, narrowly elliptic, or spatulate _____ **b.i. subsp. zanonii var. sargentii**
      4. Central axis of plant abortive or weak, plant more or less prostrate with trailing branches; leaf-blades usually about 0.5–2 cm long; marginal teeth sinuses 0.2–0.8 mm deep; proximal bracts mostly shorter than 5 cm, oblong to obovate _____ **b.ii. subsp. zanonii var. subcordata**

2a. **Lantana horrida** subsp. **horrida**

Lantana hispida Kunth, Nov. Gen. Sp. [H.B.K.] 2:260. 1817. Type: MEXICO. Veracruz: Jalapa, *Humboldt & Bonpland s.n.* (lectotype: P-HBK, barcode P00307143[di!]). Allowing for ambiguities in the digital image, this possibly could be a hybrid between *L. horrida* subsp. *horrida* and *L. hirsuta* subsp. *hirsuta*.

Lantana horrida Kunth var. *parviflora* Schauer, Prodr. [A.P. de Candolle] 11:598. 1847. Type: MEXICO. Distrito Federal: Chapultepeque, *Humboldt & Bonpland 4149* (lectotype, here designated: P-HBK, barcode P00307142[di!]). Remaining syntypes: MEXICO. Tamaulipas: Matamoros, *Berlandier 2310=880* (GH!, NY!); MEXICO. Tamaulipas: Matamoros, *Berlandier 2114=697* (GH!); Matamoros, *Ehrenberg 612* (not located). The two Berlandier collections are hybrids between *L. urticoides* Hayek and *L. strigocamara* R.W. Sanders. See 18×20 in section on hybrid synonymy.

Lantana horrida Kunth var. *grandiflora* Schauer, Prodr. [A.P. de Candolle] 11:598. 1847. Type: MEXICO: 1821, *Alaman s.n.* (lectotype, here designated: G-DC, mixed sheet upper right specimen, bar code G00219489[di!]).

Lantana camara L. var. *macrantha* Loes., Verh. Bot. Vereins Prov. Brandenburg 53:76. 1911. *Lantana camara* L. f. *macrantha* (Loes.) Moldenke, Phytologia 45:296. 1980. Type: MEXICO. Chiapas: Huiztán, *Seler 2142* (holotype?: B, destroyed).

Lantana camara L. var. *ternata* Moldenke, Phytologia 8:160. 1962. *Lantana camara* L. f. *ternata* (Moldenke) Moldenke, Phytologia 45:296. 1980. TYPE: CUBA. ISLE OF PINES: Siguanea, 21 May 1910, *Jennings 458* (HOLOTYPE: NY!).

Shrubs erect, rounded, or lax, dense to open, the central axis ± developed, branches ascending or clambering and several; twigs, peduncles and often petioles moderately setose, rarely with stipitate glands mixed among the eglandular hairs. **Leaf-blades** ovate to broadly ovate or broadly elliptic, (1–)3–9 cm long, moderately to weakly rugose, puckered between tertiary veins; apex acute to acuminate, occasionally obtuse or rounded; marginal teeth (4–)10–25(–35) per side, with sinuses 0.5–2 mm deep; adaxial surface antrorsely strigose-velutinous, the hairs 10–50/sq. mm. **Peduncles** (0.5–)0.8–2 × leaf length (usually about equalling to almost twice when mature). **Bract series** gradually reduced in size and width; proximal bracts lanceolate, lanceolate-linear, narrowly elliptic or rarely narrowly oblanceolate, 5–12 mm long, 0.5–1.5 (rare outermost one subfoliar to 2.5) mm wide, widest in proximal third (often near base), sometimes near middle or distal third; apex attenuate; indument setose or pilose, ciliate or not; distal bracts 3–5(–8) mm long. **Corolla** yellow aging yellowish or reddish orange; corolla tube 7–12 mm; corolla limb 6–10 mm in diam.

Distribution and habitat.—Mexico (northwest, central, southern), Central America (Guatamala to central Panama), Cuba; cultivated and escaped in Old World tropics; littoral and thorn shrubland, open pine-oak and deciduous montane forest and woodland; disturbance openings in tropical evergreen, sclerophyll, and deciduous forest and woodland; tropical savanna; 0–2500 m.

Selected specimens examined: **CUBA. Santiago de Cuba:** *Havard 143* (NY). **Villa Clara:** *Britton & Wilson 4960* (NY). **MEXICO. Chiapas:** *Laughlin 1535* (LL). **Chihuahua:** *LeSueur 1197* (SMU). **Guanajuato:** *Rose & Hough 4853* (US). **Nayarit:** *Kral 27536* (VDB); *Maltby 81* (US). **Puebla:** *Torres 5267* (TEX). **Veracruz:** *Nelson 384* (US). **NICARAGUA. Carazo:** *Hamblett 531* (SMU). **PANAMA. Herrera:** *Stern et al. 1708* (MO). **Veraguas:** *Batista et al. 52* (MO); *Dwyer et al. 7554* (MO).

Presumed hybrids with: **4a. L. hirsuta subsp. hirsuta. COSTA RICA. Cartago:** *Cooper 5892* (US). **San José:** *Sidney 42*, also × *L. nivea* subsp. *mutabilis* (F); *Tonduz 3377* (US); *Tonduz 7035* (LL[di]). **GUATEMALA. Alta Vera Paz:** *Turckheim 39* (US). **MEXICO. Chiapas:** *Ton 7048* (TEX[di]). **Jalisco:** *Gregory & Eiten 209* (SMU). **Nayarit:** *Waterfall 16328*, also × *L. kingii* (SMU[di]). **Veracruz:** *Nee et al. 25132* (BRIT[di]). **Yucatán:** *Lundell 8205* (US). **Zacatecas:** *Taylor & Taylor 6070* (BRIT[di]). **PANAMA. Chiriquí:** *Croat 10685*, also × *L. camara* subsp. *glandulosissima*? (MO). **5. L. insularis. CUBA. Santiago de Cuba:** *Britton et al. 12624* (NY); *Ekman 7972* (NY); *Havard 125* (NY). **6. L. scabrida. COSTA RICA. Guanacaste:** *Tonduz 13630* (LL[di]). **Limón:** *Jiménez 1903* (NY). **CUBA. Havana:** *León 1744* (NY). **Matanzas:** *Britton et al. 234* (NY). **Santiago de Cuba:** *Britton et al. 12898* (NY). **HONDURAS. Comayagua:** *Wilson 478* (NY). **PANAMA. Bocas del Toro:** *Peterson & Annable 7269* (MO). **Coclé:** *González 23* (MO). **Colón:** *Blum & Dwyer 2119* (MO); *Miller & Miller 908* (MO). **Panamá:** *Ebinger 29* (MO); *Oliver & MacBryde 1898* (MO); *Varela 3* (MO). **9i-cv×20. L. Callowiana Hybrid Group cultivars (L. depressa–tetraploid × strigocamara). AUSTRALIA. New South Wales:** *Riding 77* (BRIT). **Queensland:** *Hannan-Jones 73* (BRIT). **10. L. kingii. MEXICO. Hidalgo:** *Carney 31* (BRIT[di]). **Oaxaca;** *King 1178* (NY). **Sinaloa:** *Gentry 7133* (NY). **Sonora:** *Frye & Frye 2308* (NY). **12b. L. nivea subsp. mutabilis** (*L. horrida* subsp. uncertain, could also be *L. horrida* subsp. *tiliifolia*). **AUSTRALIA. New South Wales:** *Day 70* (BRIT); *Day 72* (BRIT). **RWANDA. Butare:** *D'Arcy 8700* (MO). **20. L. strigocamara. AUSTRALIA. Queensland:** *Hannan-Jones 35* (BRIT). See also taxa **1a, 1d, 1e** and **10** and section on hybrid synonymy: **1e×2a, 1e×2a×10, 1f×2a, 2a×4a, 2a×10, 2a×20,** and **10×2a/4a?**

2b. Lantana horrida subsp. **zanonii** (R.W. Sanders) R.W. Sanders, comb. nov. BASIONYM: *Lantana urticifolia* Mill. subsp. *zanonii* R.W. Sanders, Moscosoa 5:206. 1989. *Lantana arida* Britton f. *zanonii* (R.W. Sanders) I.E. Méndez, Willdenowia 32:291. 2002. TYPE: DOMINICAN REPUBLIC. PEDERNALES: Oviedo, 1 Oct 1984, *Sanders et al. 1682* (HOLOTYPE: JBSD!; ISOTYPES: F!, FLAS!, FTG[2]!, GH!, NY!, TEX!, US!).

Shrubs erect, rounded, lax, or trailing, dense to open, the central axis well-developed to abortive, branches ascending to arching and several or decumbent and few; twigs, peduncles and/or petioles densely setose and stipitate-glandular. **Leaf-blades** ovate, ovate-elliptic, trullate, ovate-deltate, or broadly ovate, or smallest ones subrotund, (0.5–)1–4(–6) cm long, moderately to prominently rugose, puckered between tertiary and/or secondary veins, apex acute to rounded; marginal teeth 6–20 per side, with sinuses 0.2–2.5 mm deep; adaxial surface antrorsely strigillose to strigose-velutinous, viscidly stipitate-glandular or not, the hairs 10–150/sq. mm. **Peduncles** 1–4 × leaf length (usually about 2 when mature). **Bract series** gradually reduced in size and width or all similar; proximal bracts lanceolate, lanceolate-linear, narrowly oblong or oblong-obovate to spatulate, 2.5–10 mm long, 0.5–1.5 mm wide, widest in proximal, middle, or distal third; apex rounded, obtuse or acute; indument strigose-pilose or setose, often sessile- or stipitate-glandular, ciliate or not; distal bracts 2–4 mm long. **Corolla** yellow and aging yellow, orange or orange-red; corolla tube 4–10 mm; corolla limb 4–8 mm in diam.

Distribution and habitat.—Eastern Cuba, Jamaica, Hispaniola, Puerto Rico, Virgin Islands and northern Lesser Antilles; brushland and open tropical deciduous to semi-evergreen woodland or open pine woodland on rocky (often calcareous) slopes; 0–600 m.

When I originally described *L. urticifolia* subsp. *zanonii*, it initially appeared to differ from *L. arida* var. *sargentii* in leaf and bract shape and some vestiture traits (Sanders 1989). However, careful examination for the present study failed to produce consistent distinctions or geographic correlations. If *L. subcordata* had not proved to be partially continuous with *L. horrida* var. *sargentii*, there would have been no need to recognize varieties within the subspecies. However, there is overlap in bract shapes, and one gathering (Dominican Republic. Santiago: *Liogier 13272*, LL, NY), otherwise identical to *L. subcordata*, is an erect shrub as in var. *sargentii*. Recognition of only two varieties within *Lantana horrida* subsp. *zanonii* has resulted in the lack of a nominate variety because autonyms exist only for infraspecific taxa that include the type of the species (ICBN Art. 26, Note 1, McNeill et al. 2007). Because, "*sargentii*" has priority at the varietal level, I am not free to publish the name *L. horrida* var. *zanonii* for the variety that includes the type of *L. horrida* subsp. *zanonii* (ICBN Recommendation 26A, Example1).

2b.i. Lantana horrida subsp. **zanonii** var. **sargentii** (Moldenke) R.W. Sanders, comb. & stat. nov. Basionym: *Lantana arida* Britton var. *sargentii* Moldenke, Phytologia 50:214. 1982. *Lantana glandulosissima* Hayek f. *sargentii* (Moldenke) I.E. Méndez, Willdenowia 32:297. 2002. Type: PUERTO RICO: La Parguera, 24 Feb 1935, *Sargent 137* (holotype: US!).

Lantana arida Britton, Bull. Torrey Bot. Club 37:357. 1910. Type: JAMAICA: Fort Henderson, 2 Mar 1908, *Britton & Hollick 1824* (holotype: NY!).

Shrubs erect or rounded and open to dense, the central axis well-developed, branches ascending to arching and several; twigs, peduncles and/or petioles densely setose and stipitate-glandular. **Leaf-blades** ovate, ovate-elliptic, trullate, ovate-deltate, or broadly ovate, or smallest ones subrotund, (0.5–)2–4(–6) cm long, moderately to strongly rugose, puckered between tertiary and/or secondary veins; apex acute to rounded; marginal teeth 6–20 per side, with sinuses (0.5–)1–2.5 mm deep; adaxial surface with hairs 10–50/sq. mm. **Peduncles** 1–3 × leaf length (usually about 2 when mature). **Bract series** gradually reduced in size and width; proximal bracts lanceolate, lanceolate-linear, elliptic-lanceolate, narrowly oblong, oblong-oblanceolate, or spatulate, 5–10 mm long, widest in proximal, middle, or distal third; apex rounded, obtuse or acute; distal bracts 2–4 mm long. **Corolla** yellow aging orange or orange-red; corolla tube 5–10 mm.

Distribution and habitat.—Eastern Cuba, Jamaica, Hispaniola, Puerto Rico, Virgin Islands and northern Lesser Antilles; brushland and open tropical deciduous to semi-evergreen woodland or open pine woodland on rocky (often calcareous) slopes; 0–600 m.

See description and illustration in Sanders (1989).

Selected specimens examined: **CUBA. Guantánamo:** *Britton 2168* (NY). **Santiago de Cuba:** *Britton et al. 12622* (NY). **DOMINICAN REPUBLIC. Azua:** *Mejia et al. 1181* (NY, TEX[di]). **Pedernales:** *Liogier & Liogier 26739* (NY); *Liogier 16965* (LL[di]). **Peravia:** *Liogier & Liogier 22025* (NY); *Peláez 202* (NY). **Santiago:** *Jiménez 8607* (LL[di]). **Santiago Rodriguez:** *García & Pimentel 2284* (NY). **JAMAICA. St. Catherine:** *Proctor 32628* (NY); *Yunker 17476* (NY). **St. Thomas:** *Argue-Molina & Barkley 22J4* (LL[di]); *Baars Lc 5* (BRIT). **PUERTO RICO. Guánica:** *Britton et al. 5508* (NY). **Lajas:** *Smith P.R. 18* (LL[di]). **VIRGIN ISLANDS. St. Thomas:** *Woodbury s.n.* (NY). **Tortola:** *Fishlock 45* (NY); *Proctor 44899* (NY).

Presumed hybrids with: **6. L. scabrida. JAMAICA. St. Andrew**: *Baars Lc7* (BRIT). **St. Elizabeth**: *Baars Lc8* (BRIT). **LESSER ANTILLES. St. Maarten**: *Krauss 1670* (LL[di]). **7. L. splendens. CUBA. Guantánamo**: *Britton 2216*, identification uncertain (NY). **20. L. strigocamara. DOMINICAN REPUBLIC: Samaná**: *Zanoni 17698* (NY). See also taxa **1a** and **1c.**

2b.ii. Lantana horrida subsp. **zanonii** var. **subcordata** (Urb.) R.W. Sanders, comb. & stat. nov. Basionym: *Lantana subcordata* Urb., Symb. Antill. [Urb.] 7:351. 1912. Type: DOMINICAN REPUBLIC: near Santiago, *Schomburgh 5* (lectotype: K, barcode K000470761[di!]; isotype: P[di!]).

Shrubs trailing or sprawling, the central axis abortive or weakly developed, branches decumbent, few; twigs, peduncles and often petioles moderately puberulent, setose, or glabrescent, at least peduncles usually stipitate-glandular. **Leaf-blades** ovate, deltate, or ovate-oblong, 0.5–2 cm long, strongly rugose, puckered between veins and veinlets; apex abruptly rounded or acute; marginal teeth 8–15 per side, with sinuses 0.2–0.8 mm deep; adaxial surface with hairs 50–150/sq. mm. **Peduncles** 2–4 × leaf length. **Bract series** similar in size or distal

series only partially, gradually reduced; proximal bracts oblong or oblong-obovate to -oblanceolate, 2.5–7 mm long, widest just above middle to distal third; apex rounded or obtuse, often reflexed; distal bracts 2–3 mm long. **Corolla** yellow aging to dark yellow or orange-yellow; corolla tube 4–8 mm.

Distribution and habitat.—San José de las Matas region of Cordillera Central, Dominican Republic, Hispaniola; open pine and deciduous montane forest; 100–600 m.

See further discussion and illustration in Sanders (1989).

Selected specimens examined: **DOMINICAN REPUBLIC. Inoa:** *Liogier 11179* (NY); *Liogier 15076* (LL, NY); *Liogier & Liogier 22525* (LL). **Santiago:** *Burch & Jiménez 5816* (LL, NY); *Ekman 16172* (LL[2], NY); *Jiménez 8144* (NY); *Liogier et al. 6443* (NY).

Presumed hybrids with: See taxon **1c.**

2c. Lantana horrida subsp. **tiliifolia** (Cham.) R.W. Sanders, comb. & stat. nov. Basionym: *Lantana tiliifolia* Cham., Linnaea 7:122. 1832 (as "*tiliaefolia*"). *Camara tiliifolia* (Cham.) Bentham, J. Bot. [Hooker] 2:53. 1840. Type: BRAZIL. Bahia: *Sieber s.n. (WILLD 11502)* (lectotype: B-WILLD[di!]). Remaining syntypes: BRAZIL. Bahia: *Lhotzky s.n.* (B, destroyed?); BRAZIL (southern): *Sellow s.n.* (B, destroyed?, BR[di!], K[di!], NY[2]!, W[2]!).

Lantana glutinosa Poepp. in Otto & A. Dietr., Allg. Gartenzeitung 10:315. 1842. Type: PERU: Sep 1829, *Poeppig 1375* (lectotype: G[di!]!; isotype: GH!). Sanders (2006) erred in citing G-DC as the herbarium when designating the lectotype.

Lantana tiliifolia Cham. var. *glandulosa* Schauer, Fl. Bras. [Martius] 9:257.1851. *Lantana tiliifolia* Cham. f. *glandulosa* (Schauer) R. Fern., Bol. Soc. Brot. sér. 2, 61:179. 1988. Type (Santos Silva 2001): BRAZIL. Bahia: 1840, *Blanchet 3136A* (lectotype: G-DC, barcode G00219530[di!]; isotypes: G[2,di!], P[di!],). Remaining syntypes: PERU: *Poeppig 1375* (B[destroyed], G[di!], GH!); BRAZIL. 1831, *Blanchet 20* (G-DC[di!]); BRAZIL. Bahia: 1830, *Salzmann s.n.*(G-DC[di!], MPU[di!], P[di!]).

Lantana cummingiana Hayek, Repert. Spec. Nov. Regni Veg. 2:161. 1906. Type: CHILE. [Probably in error, more likely Tacna, Peru, see Rotman & Múlgura de Romero 2010] *Cumming 1065* (holotype: W[Macbride Neg. 34339, MO!]; isotype: SI, fragment[di!]).

Lantana foetida Rusby, Bull. New York Bot. Gard. 4:431. 1907. Type: BOLIVIA: *Bang 2034=469* (holotype: NY!; isotypes: F!, GH!, MO!, NY!, US!, WU!).

Lantana glutinosa Poepp. var. *orientalis* Moldenke, Phytologia 2:411. 1948. Type: VENEZUELA. Mérida: Campo Ella, 14 Aug 1938, *Hanbury-Tracy 31* (holotype: K[di!]; isotype: NY [fragment]!).

Shrubs erect or rounded and open, occasionally lax and subscandent, the central axis well-developed, prominent, branches ascending and several, occasionaly clambering and few; twigs, peduncles and often petioles moderately to densely setose, or mixed setose and stipitate-glandular, or predominantly stipitate-glandular. **Leaf-blades** ovate to broadly ovate or broadly elliptic, (1–)3–9(–12) cm long, moderately to weakly rugose, puckered between tertiary veins, apex usually abruptly, briefly acuminate (triangular tip ca. 5 mm) to acute, occasionally obtuse or rounded; marginal teeth 15–35(–45) per side, with sinuses 0.3–1.2(–1.5) mm deep; adaxial surface antrorsely strigillose to strigose-velutinous and often viscidly stipitate-glandular, the hairs (5–)10–30(–50)/sq. mm. **Peduncles** (0.5–)0.8–2 × leaf length (usually about equalling to almost twice as long when mature). **Bract series** all small or proximal 2 or 3 series longer with distal series abruptly shortened; proximal bracts elliptic, narrowly ovate, oblong, or oblong-obovate, 2–5(–10) mm long, (0.8–)1.2–3 (rare outermost one subfoliar to 4) mm wide, widest just below middle or near proximal third, occasionally above middle; apex acute to obtuse, sometimes briefly, abruptly acuminate or, if bract is over 5 mm long, attenuate; indument thinly pilose, stipitate-glandular or not, ± ciliate; distal bracts 2–4 mm long. **Corolla** yellow to or aging reddish orange or dark red; corolla tube 7–12 mm; corolla limb 6–10 mm in diam.

Distribution and habitat.—The Guianas, Venezuela, Colombia, Ecuador, Peru, Chile, Bolivia, Paraguay, northern Argentina, and southeastern to eastern Brazil; cultivated and escaped in Old World tropics; tropical savanna with gallery forest, montane humid forest, and disturbed successional woodland, shrubland and grassland; 150–2400 m.

Andean plants are predominantly stipitate-glandular. Otherwise, I have been unable to discern any geographic or ecological patterns separating the eglandular, mixed eglandular-glandular, and predominantly stipitate-glandular plants, especially in the Brazilian Planalto. Extensive field work is needed.

Selected specimens examined: **ARGENTINA. Buenos Aires:** *Torres et al. 2154* (MO). **Córdoba:** *Botta & Miconi 314* (MO). **BRAZIL. Bahia:** *Harley 18478* (LL[di]); *Mori et al. 10635* (LL[di]); *Smith Braz. 33* (LL). **COLOMBIA. Boyacá:** *Cuatrecasas 1134* (F); *Cuatrecasas 1920* (F). **Cauca:** *Cuatrecasas 19542* (F). **Chocó:** *León 312* (MO). **Norte de Santander:** *Cuatrecasas & Rodriguez 27954* (F). **Santander:** *Cuatrecasas & Garcia 9855* (F); *Luteyn et al. 7619* (F). **Tolima:** *Cuatrecasas 10515* (F). **PERU. Cusco:** *Galiano et al. 6275* (MO); *Valenzuela et al. 4620* (MO).

Pasco: *Smith & Foster 2582* (MO). **San Martin:** *Belshaw 3267* (MO); *DeLuycker 31* (MO); *Schunke 9729* (LL[di]). **VENEZUELA. Aragua:** *Smith Venez. 8* (LL). **Lara:** *Cotton & Burandt VO797* (BRIT). **Nueva Esparta:** *Ferry s.n. Feb-Mar 1909* (F).

Presumed hybrids with: **4b. L. hirsuta subsp. amazonica. ARGENTINA. Misiones:** *Morrone et al.1476* (MO). **BOLIVIA. Beni:** *Rusby 924* (F). **La Paz:** *Brooke 6637* (F); *Buchtien 718* (F). **BRAZIL. Ceará:** *Dahlgren 869* (F). **Minas Gerais:** *Irwin 2046* (F). **Paraná:** cult., *James s.n. 10 Mar 1952* (TEX). **São Paulo:** *Mosén 1531* (MO). **CHILE.** ["Tacna Arnica Region", possibly Tacna, Peru, as the collection was made in 1922 prior to the Treaty of Lima]: *Shepard 282* (F). **COLOMBIA. Norte de Santander:** *Cuatrecasas et al. 12190* (F). **ECUADOR. Guayas:** *Cerón 18266* (MO); *Holm-Nielsen & Jeppesen 50* (LL[di]). **PERU. Cusco:** *Calatayud et al. 4165* (MO). **Huánuco:** *Woytkowski 150* (F). **Pasco:** *Macbride 4762* (F). **VENEZUELA. Aragua:** *Williams 10164*, also × *L. scabrida* (F). **Mérida:** *Ruiz-Terán & López-Figueiras 8574* (LL[di]). **6. L scabrida. GUYANA. Essequibo Islands-West Demerara:** *Dorsett et al. 32* (MO). **Upper Takutu-Upper Essequibo:** *Goodland 823* (LL[di]). **VENEZUELA. Miranda:** *Cotton 86* (BRIT). **12a. L. nivea subsp. nivea. BRAZIL. Bahia:** *Anderson et al. 37051* (F). **Goiás:** *Anderson 9931* (F); *Irwin et al. 14949* (MO). **Rio Grande do Sul:** *Wasum et al. 7573*, *L. nivea* parent probably cultivated or escaped (US). **12b. L. nivea subsp. mutabilis. ARGENTINA. Tucumán:** *Villa 532*, identification uncertain (SMU). **AUSTRALIA. New South Wales:** *Day 44* (BRIT); *Day 68* (BRIT). **Queensland:** *Day 45* (BRIT); *Day 51* (BRIT); *Day 85* (BRIT); *Hannan-Jones 61* (BRIT); *McAndrew 80* (BRIT). **ECUADOR. Imbabura:** *Acosta S. 13397* (F). **TANZANIA. Kagera:** *Festo et al. 1347* (BRIT). **13. L. cujabensis. COLOMBIA. Valle de Cauca:** *López-Palacios & Idrobo 3844* (LL[di]). **ECUADOR. Chimborazo:** *Cerón 17550* (MO). **Orellana:** *Herrera & Guerrero 145* (MO). **PERU. Cajamarca:** *Campos & Dias 2010* (MO). **Cusco:** *Suclli et al. 2089* (MO). **Tumbes:** *Dias & Peña 4023* (MO). **VENEZUELA. Mérida:** *López-Palacios 2574* (LL[di]). **14. L. viscosa. BOLIVIA. Chuquisaca:** *Peñaranda et al. 288* (MO). **Santa Cruz:** *Mendoza et al. 190* (MO). **BRAZIL. Pernambuco:** *Andrade et al. 74* (MO). **PERU. Apurímac:** *Galiano et al. 4596* (MO). **Cusco:** *Galiano et al. 5165* (MO); *Galiano et al. 6582* (MO); *Huamantupa et al. 3286* (MO); *Huamantupa 8269* (MO); *Valenzuela et al. 5320* (MO). **15. L. micrantha. ARGENTINA. Corrientes:** *Cowan 4090* (F). **BOLIVIA. Chuquisaca:** *Gutiérrez et al. 1349* (MO). **La Paz:** *Araujo et al. 1618* (MO). **Santa Cruz:** *Beck 12296* (LL[di]); *Saldias 532* (MO). **PARAGUAY. Caaguazú:** *Zardini & Velázquez 25993* (MO). **San Pedro:** *Soria 7062* (MO). **17. L. planaltensis . BRAZIL. Bahia:** *Mori et al. 10370* (LL[di]). **Ceará:** *Gentry et al. 50164A* (MO). **Minas Gerais:** *Irwin et al. 28707* (US). **Rio de Janeiro:** *Gentry et al. 49523* (MO). **19. L. paraensis. GUYANA. Cuyuni-Mazaruni:** *McDowell 2618* (F). **20. L. strigocamara. BRAZIL. São Paulo:** *Moldenke & Moldenke 19670* (SMU). **SURINAME. Commewijne:** *Lasseigne 4408* (LL[di]). **Paramaribo:** *Florschütz & Florschütz 982* (SMU, TEX[di]). **VENEZUELA. Mérida:** *López-Palacios 2565* (LL[di]). **Miranda:** *Moldenke & Moldenke 19561* (SMU). See also taxa **1d, 1e,** and **2a** and section on hybrid synonymy: **1d×2c, 2c×4b, 2c×12b, 2c×13,** and **2c×17.**

3. Lantana leonardiorum Moldenke, Caribbean Forester 2:17. 1940 (as "*leonardorum*"). TYPE: HAITI. NORD-OUEST: Jean Rabel, 6 Mar 1929, *Leonard & Leonard 13782* (HOLOTYPE: NY!; ISOTYPES: A!, GH!, US!).

Shrubs low and rounded, dense; stems 0.3–0.8(–1.5) m; branches stiffly divergent; twigs, peduncles and often petioles moderately puberulent to setose, viscid with conspicuous stalked glands, the hairs 0.1–1.5 mm. **Leaf-blades** ovate-elliptic to narrowly triangular or narrowly elliptic, 0.5–2.5 cm long, the length 1.8–3 × width, not nigrescent, papery to subcoriaceous, usually bullate (i.e., puchered between the secondary veins, unique in this species), pinninerved; base rounded to cuneate; apex abruptly rounded or acute; marginal teeth 3–6 per side, rounded to acute, spreading to ascending, with sinuses 0.5–1 mm deep; adaxial surface dull, antrorsely strigillose to strigose-velutinous and often viscidly stipitate-glandular, the hairs occurring on veins and intervening tissue, moderately dense canopy of hairs 0.6–0.8 (–1) mm with understory of hairs 0.2–0.5 mm, 30–80/sq. mm, not noticeably vitreous-pustulate, the circular bases of the strigae ca. 0.1–0.2 mm in diam.; abaxial surface dull green, moderatly densely (occasionally sparsely) pilose, the hairs on all veins and intervening tissue, 0.3–0.5 mm, all about same length, 30–200/sq. mm. **Inflorescences** remaining hemispheric; peduncles 2–4 × leaf length. **Proximal bracts** obovate to elliptic, 4–7 mm long, 1–2 mm wide, widest just above middle to distal third, with 3 veins from the base, spreading or recurved, persisting; apex rounded to obtuse or acute; indument evenly pilose and stipitate-glandular, ciliate or not, the longest hairs 0.3–0.8 mm. **Corolla** yellow aging to orange; corolla tube 4–8 mm.

Distribution and habitat.—North coast of Hispaniola; low shrubland on semi-arid littoral cliffs and slopes of coral limestone and associated savannas somewhat inland; 0–150 m.

See discussion and illustration in Sanders (1989).

Selected specimens examined: **DOMINICAN REPUBLIC. Monte Cristi:** *Jiménez & Liogier 5706* (NY); *Jiménez 8724* (NY); *Liogier 15600* (NY). **HAITI. Nord-Ouest:** *Leonard & Leonard 11930* (NY).

Presumed hybrids with: See taxon **1c.**

B. Lantana sect. **Lantana** series **Setosae** R.W. Sanders, ser. nov. TYPE: *Lantana hirsuta* M. Martens & Galeotti

Adaxial leaf surfaces setose-villous, the hairs 1–2.5 mm; abaxial leaf surfaces setose, usually sparsely so, the

hairs occurring on veins but usually not on non-innervated tissue, setiform, 0.7–2.0 mm. **Inflorescences** arrested and remaining hemispheric, prolate-globose in fruit.

4. Lantana hirsuta M. Martens & Galeotti, Bull. Acad. Roy. Sci. Bruxelles 11:326. 1844. TYPE: MEXICO. VERACRUZ: Jalapa, Mirador, 1840, *Galeotti 749* (HOLOTYPE: BR[di!]; ISOTYPES: G[di!], P[di!]).

Shrubs erect, rounded, or subscandent; stems 0.7–3 m; branches ascending and several to clambering and few; twigs, peduncles and often petioles moderately to densely setose, the hairs (0.8–)1–2.5 mm, mostly all the same length. **Leaf-blades** broadly ovate, ovate, or ovate-elliptic, rarely lanceolate, (2–)4–12 cm long, the length 1–2 × width, not nigrescent, membranous to papery, pinninerved; base usually rounded to truncate, sometimes broadly cuneate or subcordate, briefly narrowly cuneate onto petiole at very base; apex usually acuminate; marginal teeth 10–35(–40) per side, acute to rounded, spreading to appressed, then sometimes with tips recurved, with sinuses 0.3–3 mm deep; adaxial surface dull, setose to villous, the hairs occurring on veins and intervening tissue, longer ones 1–1.5 mm or more, 1–40/sq. mm, not noticeably vitreous-pustulate, the circular bases of the setae ca. 0.1–0.2 mm in diam.; abaxial surface slightly lighter or duller green than adaxial surface, setose, with the setae restricted to midrib and veins, (0.5–)0.7–1.5 mm or more, usually without shorter hairs, 0.5–80/sq. mm. **Inflorescences** occasionally 2 per leaf axil, remaining hemispheric; peduncles 0.3–1(–2) × leaf length. **Proximal bracts** linear-lanceolate, -oblong, or -triangular, outermost series often linear spatulate, 5–10(–12) mm long, 0.7–2 (rare outermost one subfoliar to 4) mm wide, widest in proximal third or near base, othermost series often dilated in distal third and widest there or equalling broadest proximal portion, with 3 veins from the base, appressed or spreading, persisting or not; apex attenuate or acute or rarely rounded at very tip; indument setose or pilose, ciliate or not, the longest hairs 0.3–1.5 mm. **Corolla** yellow to or aging reddish orange; corolla tube 8–12 mm.

Distribution and habitat.—Mexico to Brazil and northern Argentina; cultivated and escaped in Old World tropics; openings in tropical semi-evergreen forest and montane evergreen forest on poor soils, open pine-oak woodland, tropical savanna with gallery forest, areas of dense woodland, shrubland, and grassland; 0–2000(–3000) m.

KEY TO THE SUBSPECIES OF *LANTANA HIRSUTA*

1. Leaf margin coarsely serrate-dentate with usually 10–25 teeth per side, the sinuses 1–3 mm deep; leaf trichomes usually sparse, adaxial and abaxial ones usually 0.5–7/sq. mm; peduncles usually 6–14 cm; leaf-blade apex generally acuminate with a triangular tip 3–8 mm long _____ **a. subsp. hirsuta**
1. Leaf margin finely serrate-dentate with usually 25–35 teeth per side, the sinuses 0.3–1.0(–1.5) mm deep; leaf trichomes usually less sparse, adaxial and abaxial ones usually 10–40/sq. mm or more; peduncles usually 2–5 cm; leaf-blade apex generally acuminate with a narrowly triangular point (5–)10–15 mm long _____ **b. subsp. amazonica**

4a. Lantana hirsuta subsp. hirsuta.

Lantana scorta Moldenke, Publ. Carnegie Inst. Wash. No. 522 (Bot. Maya Area): 161. 1940. TYPE: MEXICO. QUERÉTARO: San Juan del Río, 17 Aug 1905, *Rose et al. 9520* (HOLOTYPE: NY!; ISOTYPE: MEXU[di!]).

Leaf-blades broadly ovate, ovate, or rarely lanceolate or ovate-elliptic; apex acuminate (abruptly contracted to triangular tip 3–8(–15) mm long), acute or rarely obtuse or rounded (triangular tip lacking); marginal teeth 10–25(–40) per side, with sinuses (0.7–)1–3 mm deep; adaxial surface with the setae 1–7(–15)/sq. mm; abaxial surface with the setae erect and usually rigidly straight, 0.5–7(–15)/sq. mm. **Peduncles** (3–)6–14 cm, 0.8–1(–2) × leaf length (usually about equalling when mature). **Proximal bracts** with longest hairs 0.5–1.5 mm.

Distribution and habitat.—Mountains and coastal plains of Mexico (frequent in eastern Mexico but collections are known from a few disjunct localities in western Mexico from Guerrero to Baja California), Central America, and extreme northwest Colombia; cultivated and escaped in Old World tropics; open pine-oak woodland, openings in semi-evergreen tropical forest and brushland, thickets, and grasslands; (0–)1000–1600 m.

The few collections from western Mexico may represent another infraspecific taxon, as they tend to have smaller leaf-blades and denser trichomes. Further work on this variation is needed.

Selected specimens examined: **GUATEMALA. Petén:** *Contreras 42* (LL[2]); *Contreras 439* (LL[2]). **Quezaltenango:** *Skutch 1347* (NY, US). **Retalhuleu:** *Shannon 200* (US). **San Marcos:** *Grant 594* (LL[di]). **MEXICO. Baja California:** *Moran 7388* (US). **Chiapas:** *Cabrera 12430*

(TEX); *Ventura & López 1816* (BRIT); *Ventura & López 4632* (TEX). **Jalisco:** *Machuca 7373* (TEX[di]). **Nuevo León:** *Encina et al. 1509* (BRIT); *Hinton et al. 24099* (TEX); *Rodriguez et al. 931* (TEX[di]). **Oaxaca:** *Campos 967* (TEX); *Martínez-Calderón 72* (NY); *Torres 8472* (TEX). **San Luis Potosi:** *Kay & Higgins 234* (SMU); *King 4278* (NY). **Tamaulipas:** *Fearing & Thompson 182* (SMU). **Veracruz:** *Day 25* (BRIT); *Hernández & Hernández 596* (NY); *Ortega et al. 19650* (NY); *Sharp 44197* (TENN); *Vasquez 488* (NY). **U.S.A. Alabama. Mobile Co.:** cult., *Mohr s.n.* (US).

Presumed hybrids with: **6. L. scabrida. GUATEMALA. Retalhuleu:** *Maxon et al. 3523* (US). **MEXICO. Chiapas:** *Martinez 8949* (TEX[di]); *Ventura & López 1685*, alternatively × *L. kingii* (BRIT[di]). **Quintana Roo:** *Cabrera & Cabrera 4046* (TEX[di]). **PANAMA. Bocas del Toro:** *Lewis et al. 898* (MO). **Chiriqui:** *Churchill & Churchill 6136* (MO); *Lewis et al 616* (MO); *Tyson 897* (MO). **Kuna Yala (San Blas):** *McDonagh et al. 167* (MO). **Panamá:** *Knapp et al. 3298* (MO). **9i-cv×20. L. Callowiana Hybrid Group cultivars (L. depressa–tetraploid × strigocamara). TANZANIA. Kilimanjaro:** *Mlangwa 352* (BRIT). **10. L. kingii. MEXICO. Oaxaca:** *González 646*, alternatively × *L. scabrida* or *L.* Callowiana Hybrid Group cv. (TEX[di]). **Puebla:** *Arsène s.n. 3 Nov 1908* (US). **San Luis Potosí:** *Davis 244* (NY); *Kral 24812* (VDB); *Parry & Palmer 707* (NY). **Tamaulipas:** *Kral 24771* (VDB). **Veracruz:** *Martínez-Calderón 1489*, also × *L. camara* subsp. *camara* (SMU). **12b. L. nivea subsp. mutabilis** (*L. hirsuta* subsp. uncertain, could also be *L. hirsuta* subsp. *amazonica*). **AUSTRALIA. Queensland:** *Day 56* (BRIT); *Day 87* (BRIT). **MALAWI. South Region:** *La Croix 2707* (MO). **SOUTH AFRICA. Limpopo:** *Day 6* (BRIT). **18. L. urticoides. MEXICO. Nuevo León:** *Weaver 611* (NY). **20. L. strigocamara** (*L. hirsuta* subsp. uncertain, could also be *L. hirsuta* subsp. *amazonica*). **AUSTRALIA. Queensland:** *McAndrew 65* (BRIT). See also taxa **1d, 1e, 2a,** and **10** and section on hybrid synonymy: **1e×4a, 2a×4a, 4a×10,** and **10×2a/4a?**

4b. Lantana hirsuta subsp. **amazonica** R.W. Sanders, subsp. nov. (**Fig. 1**). Type: BRAZIL. Distrito Federal: Bacia do Rio São Bartolomeu, adjacencias do córrego Forquilha, 9 Feb 1981, *Heringer et al. 6150* (holotype: NY! [see The C. V. Starr Virtual Herbarium of The New York Botanical Garden, http://sciweb.nybg.org/science2/VirtualHerbarium.asp, barcode 842174]; isotypes: IBGE, NY!).

Leaf-blades broadly ovate-elliptic to ovate, oblong-ovate, or elliptic; apex acuminate (abruptly contracted to triangular tip (5–)10–15 mm long), acute or rarely obtuse or rounded (triangular tip lacking); marginal teeth (20–)25–35 per side, with sinuses 0.3–1.5 mm deep; adaxial surface with the setae (3–)10–40/sq. mm; abaxial surface with the setae erect and usually arching or sinuate, 10–80/sq. mm. **Peduncles** 2–5(–8) cm, 0.3–0.5(–1) × leaf length. **Proximal bracts** with longest hairs 0.3–1 mm.

Distribution and habitat.— Brazil (eastern Amazon Basin and Planalto), Paraguay, northern Argentina, Bolivia, Peru, Ecuador, and Colombia to western Venezuela; cultivated and escaped in Old World tropics; openings in tropical semi-evergreen forest and montane evergreen forest on poor soils, tropical savanna with gallery forest and areas of dense woodland, shrubland, and grassland; 0–2000(–3000) m.

Schauer (1847, 1851 [t. 42]) recognized *Lantana hirsuta* subsp. *amazonica* as a species but misapplied the name *L. mista* L. to it (see hybrid synonymy 1f×4).

Selected specimens examined: **AUSTRALIA. Queensland:** *Robazza 24* (BRIT). **BOLIVIA. La Paz:** *Fournet 521* (LL). **BRAZIL. Distrito Federal:** *Botelho 16* (MO); *Moldenke & Moldenke 19593* (SMU). **Maranhão:** *Balick et al. 1518* (LL). **Minas Gerais:** *Anderson et al. 35661* (F); *Irwin et al. 19747* (MO); *Irwin et al. 20924* (F); *Mexia 4734*, p.p. (F). **Pará:** *Tsugaru & Sano B-532* (MO). **Paraná:** *Hatschbach 32192* (LL). **Rio de Janeiro:** *Duarte 5633* (MO); *Hoehne 5698* (NY); *Hoehne 5906* (NY). **São Paulo:** *Houk & Carvalho 40* (F); *Houk & Carvalho 62* (NY, US). **ECUADOR. Manabí:** *Acosta S. 10615* (F).

Presumed hybrids with: **6. L. scabrida. COLOMBIA. Magdalena:** *Fonnegra et al. 7396*, also × *L. camara* subsp. *glandulosissima* (MO). **VENEZUELA. Distrito Capital:** *Lassingne 4443* (F). **12a. L. nivea subsp. nivea. BRAZIL. Distrito Federal:** *Moldenke & Moldenke 19596* (NY, SMU). **Minas Gerais:** *Hatschbach 31444* (F); *Lanna S. 684* (LL); *Mexia 4734*, p.p. (US). **Rio de Janeiro:** *Brade 18697* (F); *Duarte 5633*, p.p. (F); *Lems s.n. 19 Mar 1964* (NY); *Moldenke 19617* (BRIT); *Moldenke 19993* (NY, SMU). **São Paulo:** *Moldenke & Moldenke 19658*, alternatively × *L. nivea* subsp. *mutabilis* (SMU). **URUGUAY. Montevideo:** cult., *Moldenke & Moldenke 19701* (SMU). **12b. L. nivea subsp. mutabilis. BRAZIL. Distrito Federal:** *Heringer 15353*, alternatively × *L. nivea* subsp. *nivea* (NY). **Paraíba:** *Agra et al. 5009* (MO). **13. L. cujabensis. PERU. Madre de Dios:** *Núñez & Galiano 14621* (MO). **14. L. viscosa. BRAZIL. Minas Gerais:** *Irwin 2046* (SMU); *Machado 30* (F). **Paraná:** *Hatschbach 37868* (MO). **Rio Grande do Sul:** *Henz 29626* (F). **15. L. micrantha. ARGENTINA. Misiones:** *Zuloaga et al. 5033* (MO). **BOLIVIA. La Paz:** *Lewis 882132* (F). **17. L. planaltensis. BRAZIL. Paraná:** *Braga 92* (US); *Kumurow 345* (VDB); *Winder 013A* (BRIT); *Winder 066* (BRIT); *Winder 067* (BRIT). **Santa Catarina:** *Reitz 5303* (US). **19. L. paraensis. BRAZIL. Maranhão:** *Snethlage 112* (F). **Pará:** *Drouet 2090* (F); *Monteiro da Costa 25* (F); *Prance et al. 25022* (MO). See also taxon **1d, 2c,** and **4a** and section on hybrid synonymy: **2c×4b, 4b×12a, 4b×13,** and **4b×15.**

5. Lantana insularis Moldenke, Caribbean Forester 2:16. 1940. Type: JAMAICA: [location uncertain, see Sanders 2006] 9 Mar 1920, *Maxon & Killip 912* (holotype; NY!; isotype: US!).

Shrubs erect, apparently pyramidal and open; stems 1–3 m; branches ascending and several; twigs, peduncles and often petioles spasely setose but viscid with conspicuous, dense stalked glands, the setae 1.2–2 mm, stipitate glands, 0.3–0.7 mm. **Leaf-blades** ovate-triangular to ovate-elliptic or lanceolate, 4–10 cm long, the length

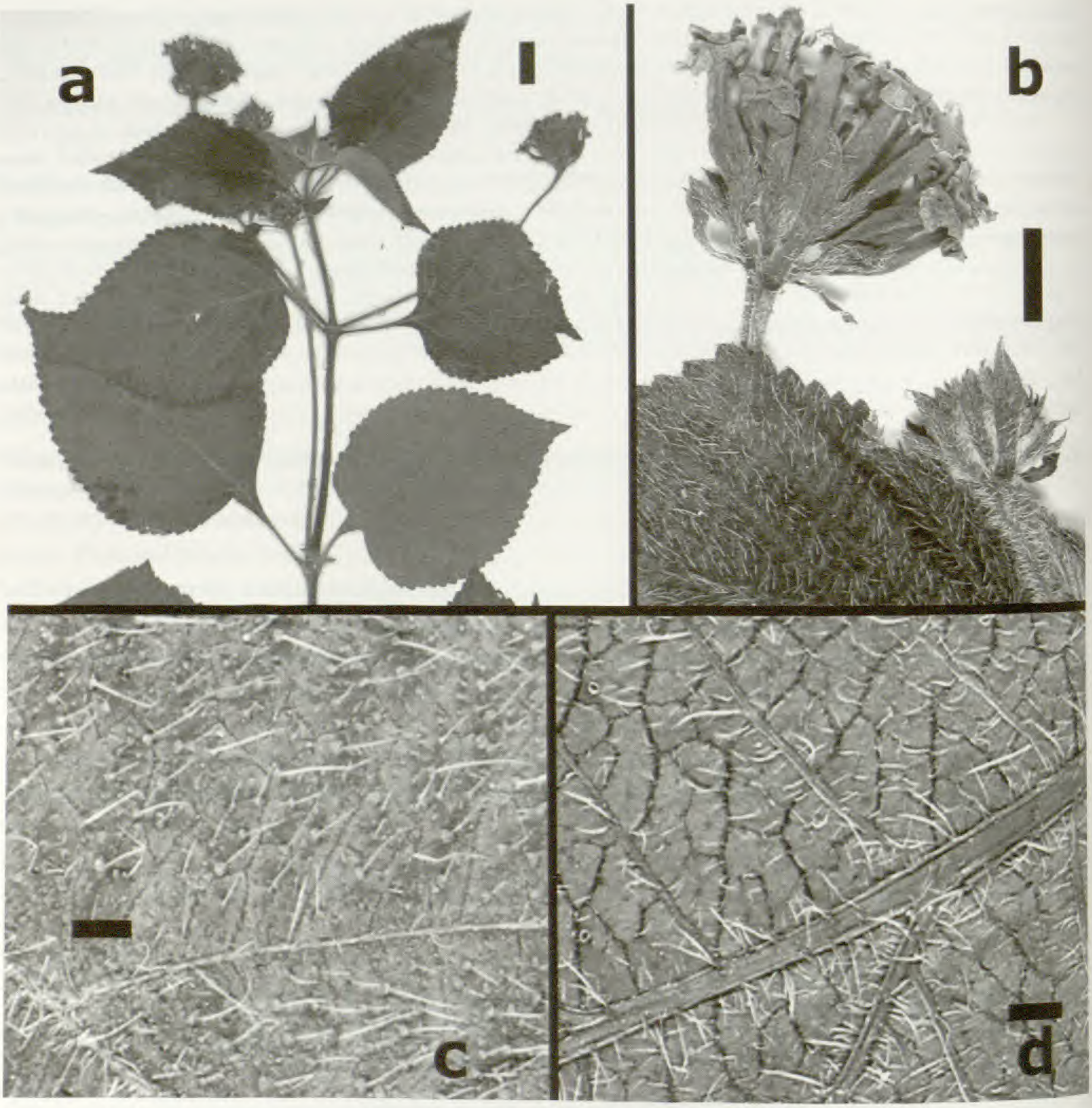

Fig. 1. *Lantana hirsuta* subsp. *amazonica*, holotype (*Heringer et al. 6150,* NY). **a.** twig with inflorescences. **b.** inflorescence. **c.** adaxial leaf surface. **d.** abaxial leaf surface. Scale bars: a = 1 cm; b = 5 mm; c & d = 1 mm.

(1.5–)1.7–2.5 × width, not nigrescent (although apparently drying dark due to dark green fresh color), membranous to papery, pinninerved; base usually rounded to truncate, sometimes broadly cuneate or subcordate, briefly narrowly cuneate onto petiole at very base; apex acuminate to attenuate; marginal teeth (20–)25–40 per side, mostly acute, appressed or ascending, tips sometimes recurved, with sinuses 0.2–0.7(–1) mm deep; adaxial surface dull, setose to villous, the hairs occurring on veins and intervening tissue, longer ones 1–1.5 mm or more, 1–10/sq. mm, not noticeably vitreous-pustulate, the circular bases of the setae ca. 0.1–0.2 mm in diam.; abaxial surface slightly lighter or duller green than adaxial surface, setose, with the setae restricted to midrib and veins, 1–1.5 (those on finer veins about 0.7) mm, 0.5–10/sq. mm. **Inflorescences** remaining hemispheric; peduncles 0.5–1 × leaf length. **Proximal bracts** oblong-lanceolate or -elliptic, 4–6 mm long, 1.5–2 mm wide, widest in proximal third or near middle, rarely above middle, with 3 veins from the base, appressed or spreading, ± persisting and reflexed in fruit; apex acute to obtuse or rounded; indument setose-pilose, ciliate, the longest hairs 1–2 mm. **Corolla** yellow to or aging reddish orange; corolla tube 7–12 mm.

Distribution and habitat.—Jamaica and Cuba; openings or disturbed areas in cloud or montane forest, moist savanna; 1000–3000 m.

Selected specimens examined: **JAMAICA. St. Andrew:** *Britton 108* (NY); *Nichols 5* (NY).

Presumed hybrids with: **6. L. scabrida. CUBA. Sancti Spíritus:** *Alain A1620* (NY). See also taxon **2a.**

C. Lantana sect. **Lantana** series **Strigosae** R.W. Sanders, ser. nov. TYPE: *Lantana scabrida* Sol.

Adaxial leaf-surfaces strigose, strigillose, or scabrid, the hairs (or their persistent bases) about 1 mm or less; abaxial leaf-surfaces strigose, usually sparsely so, the hairs occurring only on veins but usually not on non-innervated tissue, strigiform, 0.03–1 mm. **Inflorescences** arrested and remaining hemispheric, prolate-globose in fruit (continuing to initiate flowers somewhat in *L. nivea*, but flowers, bracts, and abortive fruits deciduous in lower portion leaving it more or less bare with only a hemisipheric cluster of flowers/fruits active).

6. Lantana scabrida Sol., Hortus Kew. [W. Aiton] 2:352. 1789. TYPE: cult., Royal Bot. Gard. Kew, 1777, *Solander s.n.* (LECTOTYPE: BM!).

Lantana crenulata Otto & A. Dietr., Allg. Gartenzeitung 9:363. 1841. TYPE: Unknown.

Lantana crocea Jacq. var. *guatemalensis* Loes., Verh. Bot. Vereins Prov. Brandenburg 53:76. 1911. TYPE: GUATEMALA. HUEHUETENANGO: Nenton, *Seler 2805* (HOLOTYPE?: B, destroyed).

Lantana scandens Moldenke, Phytologia 2:18. 1941. TYPE: MEXICO. MICHOACAN: Coalcomán, 3 Oct 1938, *Hinton 12315* (HOLOTYPE: NY!; ISOTYPES: F!, K[di!], LL!, MO!, NY!, US!).

Lantana brittonii Moldenke, Phytologia 2:52. 1941 (as "brittoni"). TYPE: JAMAICA. TWEEDSIDE: Moody's Gap, 10 Sep 1908, *Harris & Britton 10541* (HOLOTYPE: NY!; ISOTYPE: US!).

Lantana flava Medik. f. *sandersii* I.E. Méndez, Willdenowia 32:296. 2002. TYPE: CUBA. HOLGUÍN: Sagua de Tánamo, 8 Apr 1987, *Méndez 3373* (HOLOTYPE: HIPC[di!]).

Shrubs rounded and open, lax or subscandent; stems 0.5–6 m; branches ascending to clambering, often few; twigs, peduncles and often petioles thinly to moderately strigose or setose, the hairs 0.2–1 mm. **Leaf-blades** ovate to elliptic-lanceolate or lance-oblong, (2–)5–15 cm long, the length (1.5–)1.7–2.5(–3) × width, nigrescent, papery to subcoriaceous, triplinerved; base attenuately to abruptly tapering onto petiole from middle or just below middle; apex acuminate, acute, obtuse, occasionally rounded; marginal teeth (12–)17–25(–35) per side, obtuse, rounded, or acute, spreading to appressed, then sometimes with tips recurved, with sinuses 0.5–1.5 mm deep; adaxial surface lustrous, thinly strigose or scabrous, the hairs occurring on veins and center of areoles, 0.1–0.6(–1.2) mm (longest usually 0.2–0.4 mm, except in "scandens" morph where 0.6–1.2 mm), (4–)6–12/sq. mm, sometimes with conspicuous vitreous or whitened pustulate bases 0.1–0.3 mm in diam.; abaxial surface whitish or pale green but not glaucous, antrorsely strigose-scabrous, with the strigae scattered on veins and veinlets, (0.03–)0.1–0.5(–1) mm (longest mostly 0.3–0.5 mm, except in "scandens" morph where 0.5–1 mm), (4–)6–12(–25)/mm sq. ("scandens" morph 0–5)/sq. mm). **Inflorescences** remaining hemispheric; peduncles 0.5–1 × leaf length. **Proximal bracts** narrowly lanceolate, lance-elliptic or -oblong (including those with slight constriction in proximal third; occasionally 1 or 2 outermost bracts subfoliar or narrowly spatulate), 4–8 mm long, 1–2 mm wide, widest at very base, in proximal third, or in middle third (then often equally wide at base), with 3 veins from the base, appressed or spreading, usually deciduous after flowering; apex attenuate or acuminate; indument sparsely strigose, somewhat or not ciliate, the longest hairs 0.3–0.5(–1) mm. **Corolla** yellow to or aging reddish orange; corolla tube 7–12 mm.

Distribution and habitat.—West Indies (Cuba, Jamaica, possibly Hispaniola, Puerto Rico, possibly the Virgin Islands, and the northern Lesser Antilles), eastern coastal Mexico (Tamaulipas southward) with localized disjunction in southwestern Michoacán (long-haired, scandent morph), Central America, and Caribbean coast and slopes of Colombia, Venezuela, and the Guianas; disturbance openings, savanna and man-made grassland in tropical dry to humid forest; 0–1600 m.

Lantana scabrida is replaced in upland and western Mexico by *L. kingii*, but the two are apparently sympatric in Tamaulipas. Field work is needed to determine the status of the isolated scandent morph in Michoacán.

Sanders (1987b) reported the chromosome number ($2n = 44$) of *Lantana scabrida* in the Luquillo Mountains of Puerto Rico (*Sanders 1510*) as *L. camara* due to misapplication of the name and confusion with *L. strigocamara*.

Selected specimens examined: **BELIZE. Stann Creek:** *Gentle 7969* (LL[di]). **CUBA. Camagüey:** *Shafer 85* (NY). **JAMAICA. Manchester:** *Britton 975* (NY). **Portland:** *Britton 675* (NY); *Wight 4* (NY). **St. Ann:** *Crosby et al. 737* (NY). **St. Catherine:** *Nesbeth & Scott 38* (NY). **St. Elizabeth:** *Britton 1086* (NY); *Perraton 27* (NY). **Westmoreland:** *Britton & Hollick 1946* (NY). **MEXICO. Tamaulipas:** *Richardson 1253* (TEX[di]); *Sullivan 617* (TEX[di]). **PANAMA. Bocas del Toro:** *Gordon 52* (MO). **PUERTO RICO. Jayuya:** *Quinones 27* (UPRRP). **Luquillo:** *Howard 16122* (SMU). **Naguabo:** *Boom 9808* (NY). **Rio Grande:** *Sanders 1510* (FTG). **San Lorenzo:** *Axelrod 11854* (BRIT). **VENEZUELA. Miranda:** *Moldenke & Moldenke 19560* (SMU).

Presumed hybrids with: **18. L. urticoides. MEXICO. Tamaulipas:** *Mears 516a* (TEX[di]); *Mears 516e* (SMU[di]). **20. L. strigocamara. PUERTO RICO. Ponce:** *Axelrod & Fritsch 12526* (BRIT). See also taxa **1a, 1d, 1e, 2a, 2bi, 2c, 4a, 4b, 5,** and **10** and section on hybrid synonymy: **1a×6, 1d×6,** and **12×6/7?**

7. Lantana splendens Medik., Hist. & Commentat. Acad. Elect. Sci. Theod.-Palat. 3. Phys. 226. 1775. *Lantana camara* L. var. *splendens* (Medik.) Moldenke, Phytologia 33:130. 1976. *Lantana camara* L. f. *splendens* (Medik.) Moldenke, Phytologia 45:296. 1980. LECTOTYPE: icon in Dillenius, Hort. Eltham. t.57, f.67. 1732. EPITYPE, here redesignated: BAHAMA ARCHIPELAGO. SOUTH ANDROS: Smith's Hill, 24 Sep 1974, *Correll 43497* (LL[di]!; ISOEPITYPES: FTG!, NY!). As the author who first designated an epitype (*Herb Sherard 1269*, OXF) for *L. splendens* (Sanders 2006), I hereby revoke that designation. Problems with the Sherard specimen include gall-transformed capitula, structural and arrangement details of the abaxial leaf-blade strigae, and unexceptional luster intensity on the adaxial leaf surface. In my notes taken at OXF, I recorded the presence of some filiform hairs along the midrib (as in *L. bahamensis*), despite these not being visible in the images later sent to me by OXF (Sanders fig.6, 2006). Furthermore, *Correll 43497* is a closer match to the lectotype in leaf shape and branching than is the Sherard specimen. Since the lectotype very likely was illustrated from cultivated live plants, these may have been mixed as to genetic purity, the Sherard specimen being an impure sample. Because *L. splendens* would take priority should later workers combine it with other similar species, its extra-protologue reference specimen must be an unambiguous element of the indigenous taxon, as well as be the best match to the protologue, to avoid nomenclatural instability.

Shrubs erect, open or virgate; stems 0.5–2.5 m; branches ± divaricate, few to numerous, the internodes often wiry and 2–3 times as long as the subtending leaves (unique to this species); twigs, peduncles and often petioles glabrescent to thinly pubescent or scabridulous, the hairs 0.05–0.3 mm. **Leaf-blades** ovate, ovate-triangular, elliptic or lanceolate triangular, 1–5(–7) cm long, the length (1.5–)1.7–2.5 (–3) × width, nigrescent or not, coriaceous to subcoriaceous, triplinerved; base attenuately tapering onto petiole from middle or just below middle; apex attenuate, acute or obtuse; marginal teeth 9–21 per side, rounded to acute, often appressed, with sinuses 0.3–1 mm deep; adaxial surface lustrous to intensely so, thinly scabrous, the hairs occurring on veins and center of areoles, 0.1–0.2 mm, 1–7/sq. mm, noticeably vitreous-pustulate, the circular bases 0.3–0.5 mm or more in diam. on mature leaves, often filling whole areole; abaxial surface whitish or pale green but not glaucous, antrorsely strigose-scabrous to nearly glabrous, with the strigae scattered on veins and veinlets, 0.05–0.3 mm, 1–15/sq. mm (sometimes immature leaves with deciduous, mealy pubescence on veins). **Inflorescences** remaining hemispheric; peduncles 0.6–1.5 × leaf length. **Proximal bracts** oblong-lanceolate, elliptic, or 1 or 2 outermost ones oblong-obovate or-oblanceolate, 2–4(–5) mm long, 0.7–1.7 mm wide, widest usually near middle or distal third, sometimes proximal third, with 3(–5) veins from the base, appressed or spreading, usually deciduous after flowering; apex acute; indument strigillose, hardly ciliate, the longest hairs ≤ 0.3(–0.5) mm. **Corolla** yellow to orange probably aging with more reddish tints; corolla tube 5–8 mm.

Distribution and habitat.—Central Bahama Archipelago, Cuba (central northern coastal islands); disturbed sclerophyllous woodland, thickets, and savanna on pitted limestone; 0–50 m.

Selected specimens examined: **BAHAMA ARCHIPELAGO. Andros:** *Hill 3002* (NY). **Long Island:** *Coker 513* (NY); *Cerbin 138* (NY). **New Providence:** *Wilson 8425* (NY). **South Andros:** *Correll & Correll 50643* (NY); *Correll 43602* (FTG, SMU); *Pansegrau 103* (BRIT). **CUBA. Ciego de Ávila:** *Shafer 2694* (NY).

Presumed hybrids with: See also taxa **1a** and **2bi** and section on hybrid synonymy: **12×6/7?**

8. Lantana hodgei R.W. Sanders, J. Arnold Arbor. 68:343. 1987. TYPE: LESSER ANTILLES. DOMINICA: Fresh Water Lake, 10 Mar 1967, *Fosberg 48269* (HOLOTYPE: US!; ISOTYPES: F!, GH!, K[di!], MO!, NY!).

Shrubs lax or subscandent; stems 1–3 m; branches ascending or clambering, few; twigs, peduncles and often petioles thinly strigose, the hairs 0.2–1 mm. **Leaf-blades** ovate to elliptic-lanceolate, 5–15 cm long, the length 1.7–2.5(–3) × width, nigrescent, subsucculent or coriaceous, triplinerved; base attenuately to abruptly tapering onto petiole from below middle; apex abruptly acuminate; marginal teeth 20–40 per side, obtuse or acute, spreading to appressed, then sometimes with tips recurved, with sinuses 0.5–2 mm deep; adaxial surface in-

tensely lustrous, strigose-glabrescent but smooth, the hairs occurring on veins (scattered) and center of areoles, 0.2–0.4(–0.8) mm, 0–2/sq. mm, flaccid and strongly appressed to surface (unique in this species), often deciduous, not pustulate based; abaxial surface whitish or gray-green (but not glaucous), weakly strigose and nearly glabrous, with the strigae scattered on veins and veinlets, 0.1–0.6 mm, 0–4/sq. mm. **Inflorescences** remaining hemispheric; peduncles ⅙–⅓ × leaf length. **Proximal bracts** oblanceolate to narrowly oblong to narrowly lanceolate, (4–)6–10 mm long, 1–1.7 mm wide, widest in proximal third to distal third, with 3 veins from the base, appressed or spreading, deciduous after flowering; apex attenuate; indument glabrescent, not ciliate, the longest hairs ≤ 0.5 mm. **Corolla** yellow to or aging reddish orange; corolla tube 7–10 mm.

Distribution and habitat.—Central Lesser Antilles (Dominica, Martinique, probably Saint Lucia); sunny slopes in borders and openings of montane rainforest; 400–1000 m.

See discussion in Sanders (1987c).

Selected specimens examined: **LESSER ANTILLES. Dominica:** *Lee 9* (NY); *Lloyd 201* (NY); *Smith 10216* (SMU). **Martinique:** *Bailey & Bailey 240* (NY).

Presumed hybrids with: **[9i-cv×20]. L. Callowiana Hybrid Group cultivars (L. depressa–tetraploid × strigocamara). LESSER ANTILLES. Dominica:** *Hill 23959*, alternatively × *L. strigocamara* (BRIT). See also taxon **1d.**

9. Lantana depressa Small, Bull. New York Bot. Gard. 3:436. 1905. TYPE: U.S.A. FLORIDA. Dade Co.: 4 Nov 1903, *Small & Carter 747* (HOLOTYPE: NY!; ISOTYPE: F!).

Shrubs trailing to erect, dense to ± open; stems 0.1–3 m; branches ascending, decumbent or prostrate, usually several to numerous; twigs, peduncles and often petioles thinly setose or strigose-setose, the hairs 0.5–1.5 mm. **Leaf-blades** ovate-elliptic to elliptic, 1–6(–8) cm long, the length 1.7–2.3(–3) × width, induplicately curved at maturity (unique to this species), nigrescent, papery, triplinerved; base obtuse or acute, tapering onto petiole from middle or just below middle; apex abruptly tapered, obtuse or acute; marginal teeth 3–15 per side, rounded to acute, often appressed, with sinuses 0.5–1.5 mm deep; adaxial surface lustrous, antrorsely strigillose to strigose, the hairs occurring on veins and center of areoles, 0.1–0.7(–1) mm, 2–8/sq. mm, not noticeably vitreous-pustulate, the circular bases of the strigae ca. 0.1–0.3 mm in diam.; abaxial surface slightly lighter or duller green, antrorsely strigose-scabrous, with the strigae scattered on veins and veinlets, longest ones 0.5–1 mm, 0.5–8/sq. mm. **Inflorescences** remaining hemispheric; peduncles 0.7–2 × leaf length. **Proximal bracts** elliptic-lanceolate, 4–7 mm long, 0.5–1.5 mm wide, widest at middle or just below, with 3 veins from the base, appressed or spreading, persisting and reflexed from base in fruit; apex acute to attenuate; indument strigose, ciliate or not, the longest hairs 0.1–1 mm. **Corolla** yellow aging to a dark yellow or dull, pale orange; corolla tube 5–11 mm.

Distribution and habitat.—Peninsular Florida; limestone pinelands, wet prairies, and dunes; 0–50 m.

See more complete discussion in Sanders (1987a) and Maschinski et al. (2010) and illustrations in Sanders (1987a).

KEY TO VARIETIES OF *LANTANA DEPRESSA*

1. Low-mounded shrubs, rarely exceeding 0.3 m, prominent stems prostrate or decumbent (to 1 m long); leaf-blades 1–3 cm long (to 4 or 5 cm in some cultivars) ____ **i. var. depressa**
1. Pyramidal to rounded shrubs, 0.5–3 m, prominent stems erect, ascending or arching; leaf-blades 3–6 cm long.
   2. Rounded shrubs without an erect central axis, all branches more or less spreading-arching; stem hairs 0.5–1 mm; corolla limb 8–10 mm across ____ **ii. var. floridana**
   2. Pyramidal shrubs with an erect central axis, stiffly ascending distal branches and some decumbent basal branches; stem hairs 1–1.5 mm; corolla limb 6–8 mm across ____ **iii. var. sanibelensis**

9i. Lantana depressa var. depressa

Lantana montevidensis (Spreng.) Briq. var. *aurea* Mattoon, Plant Buyer's Guide, ed. 6, 167. 1958. nom. nud. TYPE: none. Apparently a name of horticultural origin applied to *Lantana depressa* Small var. *depressa* (see Sanders 2001, p. 356).

Lantana ovatifolia Britton var. *reclinata* R.W. Long, Rhodora 72:34. 1970. TYPE: U.S.A. FLORIDA. Dade Co.: Homestead, 14 Oct 1962, *Cooley 9324* (HOLOTYPE: GH!; ISOTYPE: USF).

Lantana ovatifolia Britton f. *parvifolia* Moldenke, Phytologia 50:309. 1982. TYPE: U.S.A. FLORIDA. Dade Co.: Homestead, 27 Mar 1933, *Perkins 1625* (HOLOTYPE: BH[di!]).

Shrubs low mounded, dense, 0.1–0.3 (spreading to 1) m, the central axis abortive or hardly developed; branches prostrate or decumbent, twigs, peduncles and often petioles with hairs 0.5–1 .5 mm. **Leaf-blades** 1–3 cm long (to 4 or 5 cm in some cultivars). **Corolla** with tube 5–9 mm; corolla limb 5–8 mm in diam.

Distribution and habitat.—Peninsular Florida (Miami Ridge); cultivated and escaped in tropics and subtropics worldwide; limestone pinelands; 0–25 m.

Because of its drought tolerance, compact habit, and profuse flowering, *Lantana depressa* var. *depressa* has been cultivated widely since the 1950s. A tetrploid cultivar and *L. strigocamara* apparently are the parents of the currently popular Callowiana Hybrid Group cultivars, which have the floral colors of *L. strigocamara* and are cultivated worldwide and escaped pantropically (see Sanders 2001, specimen citations below, and **9i-cv×20** in the section on hybrid synonymy).

Selected specimens examined: **AUSTRALIA. Queensland:** cult., *McAndrew MJH-647* (BRIT). **U.S.A. Florida. Dade Co.:** *Deam 60894* (NY); *Demaree 10208* (SMU); *Kral 53943* (VDB); *Kral 53964* (VDB); *Kral 66236* (NY, VDB); *Kral 70742* (VDB); *Small et al. 3482* (NY); *Traverse 646* (SMU); **Texas. Blanco Co.:** cult., *Sanders 5190* (BRIT). **Harris Co.:** cult., *Traverse 2389* (BRIT).

Presumed hybrids with: **18. L. urticoides. U.S.A. Texas. Guadalupe Co**.: *Lu-Irving 08-2, L. depressa* parent cultivated (WTU). **20. L. strigocamara**. U.S.A. Florida. Monroe: *Moldenke 797* (NY).

Lantana Callowiana Hybrid Group cultivars [9i-cv×20] (See Howard 1969 and Sanders 2001). **AUSTRALIA. Queensland**: *Day 59* (BRIT). **CUBA. Havana**: *Moldenke 19862* (SMU). **GUATEMALA. Sololá:** *Day 18* (BRIT). **JAPAN. Funaura**: *Tanaka & Okamoto 020055* (BRIT). **MEXICO. Jalisco**: *Jiménez 357* (NY). **Sinaloa**: *Hutchison 2544* (NY). **Veracruz**: *Day 15* (BRIT). **TANZANIA. Kilimanjaro**: *Mlangwa 352*, possibly with genes of *L. hirsuta* (BRIT[di]). **Tanga** *Sallu 248* (BRIT). **TRINIDAD & TOBAGO. St. Augustine**: cult., *Smith Tr. 9* (LL). **U.S.A. Florida. De Soto Co.**: *Kral 57309* (VDB). **Lee Co.**: *Kral 11998*, alternatively a backcross into *L. strigocamara* (VDB). **Georgia. Camden Co.:** *Carter & Carter 13218* (FTG). **Louisiana. Iberia Par.:** *Webb 4764* (VDB). **Massachusetts**: cult., *Howard 16794* (SMU). **Missouri. Boone Co.:** cult., *Dunn 13828* (BRIT). **South Carolina. Beaufort Co.**: *Leonard & Radford 2743 p.p.* (VDB). **Tennessee. Davidson Co.**: cult., *Hackney s.n. 10 Oct 1990* (VDB). **Texas. Blanco Co.**: cult., *Sanders 5470* (BRIT). **Dallas Co.:** cult., *Shinners 8526* (SMU); cult., *Shinners 29844*, probably 'Cream Carpet' (SMU); cult., *Wansbrough 251* (SMU). **Galveston Co.:** cult., *Traverse 2515* (BRIT). **Harris Co.:** cult., *Traverse 2316* (BRIT); cult, *Traverse 2401* (BRIT). **Hidalgo Co.:** cult., *Greenfield 5* (BRIT). **Montgomery Co.:** *Sanders 6286* (BRIT). **Travis Co.:** *Green 22* (VDB).

Presumed further hybrids of [9i-cv×20] with: **10. L. kingii. MEXICO. Guerrero**: *Guerra 36* (LL[di]). **12b. L. nivea subsp. mutabilis. AUSTRALIA. Queensland**: *Day 86* (BRIT); *Horrocks 55* (BRIT). **TRINIDAD & TOBAGO. St. Augustine:** cult., *Nevling 255* (SMU). **17. L. planaltensis. BRAZIL. Bahia:** *Döbereiner & Tokarnia 1490* (LL[di]). **PARAGUAY. Central**: *Pérez 890* (MO). **18. L. urticoides. U.S.A. Texas. Anderson Co.:** cult., *Couch 73* (SMU). **Cameron Co.:** *Traverse 1030* (BRIT). **20. L. strigocamara. U.S.A. Florida. Lee Co.:** *Schallert 19640* (SMU[di]). **Leon Co.:** *Bratcher 57*, alternatively × *L. depressa* var. *depressa* (BRIT); *Godfrey 53542*, alternatively × *L. depressa* var. *depressa* (VDB). **Seminole Co.:** *Schallert 378* (BRIT[di]). See also taxa **1a**, **1b**, **1d**, **1e**, **1f**, **2a**, **4a** and **20** and section on hybrid synonymy: **9i-cv×20.**

9ii. Lantana depressa var. **floridana** (Moldenke) R.W. Sanders, Syst. Bot. 12:55. 1987. Basionym: *Lantana bahamensis* Britton var. *floridana* Moldenke, Phytologia 31:373. 1975. Type: U.S.A. Florida. Dade Co.: beach opposite Miami, Nov 1904, *Small 2101* (holotype: NY!).

Shrubs rounded, open, 0.4–1 m, the central axis ± developed, but not prominent; branches arching or ascending; twigs, peduncles and often petioles with hairs 0.5–1 mm. **Leaf-blades** 3–6(–8) cm long. **Corolla** with tube 7–11 mm; corolla limb 8–10 mm in diam.

Distribution and habitat.—Peninsular Florida; Atlantic barrier dunes and interior sand ridges, stabilized and relictual dunes; 0–50 m.

Selected specimens examined: **U.S.A. Florida. Brevard Co.:** *Moldenke 218* (NY). **Martin Co.:** *Kral 15385* (VDB); *Kral 57137* (NY, VDB). **Palm Beach Co.:** *Small 2134* (NY). **St. Johns Co.:** *Morton 4508* (SMU); *Small 2313* (NY). **Volusia Co.:** *Ray et al. 10817* (SMU). **Geogia:** cult., *Baldwin s.n.* (NY).

Presumed hybrids with: **20. L. strigocamara. U.S.A. Florida. Duval Co.:** *Curtiss 1968* (NY[2]). **Lake Co.:** *Small 8666* (NY[2]). **Volusia Co.:** *Kral 18406* (VDB); *Whetstone 14518* (VDB). See also section on hybrid synonymy: **9ii×20.**

9iii. Lantana depressa var. **sanibelensis** R.W. Sanders, Syst. Bot. 12:55. 1987. Type: U.S.A. Florida. Lee Co.: Sanibel Island, 11 May 1954, *Cooley 2674* (holotype: GH!; isotypes: USF[2]!).

Shrubs erect and pyramidal, proximally dense, distally open, 1–3 m, the central axis well-developed, prominent; proximal branches decumbent, distal ones ascending; twigs, peduncles and often petioles with hairs 1–1.5 mm. **Leaf-blades** 3–6 cm long. **Corolla** with tube 7–10 mm; corolla limb 6–8 mm in diam.

Distribution and habitat.—Peninsular Florida; wet limestone coastal prairies and calcareous dunes of Gulf barrier islands; 0–25 m.

Selected specimens examined: **U.S.A. Florida. Collier Co.:** *Correll 47737* (FTG, NY); *Sheehan s.n. 7 Mar 1919* (NY). **Lee Co.:** *Brumbach 9265* (BRIT, NY); *Hitchcock 268* (NY).

Presumed hybrids with: **20. L. strigocamara. U.S.A. Florida. Collier Co.:** *Ertter 2261* (NY); *Taylor & Taylor 5176* (BRIT). **Lee Co.:** *Brumbach 8182* (NY); *Brumbach 8283* (NY, US); *Brumbach 9058* (VDB).

10. Lantana kingii Moldenke, Phytologia 8:161. 1962. Type: MEXICO. Oaxaca: Isthmus of Tehuantepec, Niltepec, 17 Jul 1959, *King 1775* (holotype: TEX!; isotype: US!).

Shrubs erect or rounded, open; stems 0.5–2(–3) m; branches ascending and several; twigs, peduncles and often petioles glabrescent with scattered antrorse hairs, the hairs ca. 03–0.7 mm. **Leaf-blades** ovate, ovate-elliptic or ovate-triangular (rarely, especially if less than 2 cm long, obovate to rotund), 1–8 cm long, the length (0.8–)1.2–2(–2.5) × width, not nigrescent, papery to subcoriaceous or subsucculent, triplinerved to pinninerved; base attenuately tapering onto petiole from middle or just below middle to abruptly contracted and broadly cuneate, sometimes forming a short narrow petiolar wing; apex acute or acuminate (or abruptly to broadly rounded); marginal teeth (3–)6–15(–25) per side, obtuse or rounded, spreading to appressed, then sometimes with tips recurved, with sinuses 1–2.5 mm deep; adaxial surface lustrous, scabrous, the hairs occurring on veins and intervening tissue (sometimes just center of areoles), 0.1–0.5 mm, 3–7(–12)/sq. mm, mostly deciduous leaving the noticeably vitreous-pustulate circular bases, these 0.2–0.5 mm in diam.; abaxial surface whitish or pale green but not glaucous, antrorsely strigose-scabrous to nearly glabrous, with the strigae scattered on veins and veinlets, 0.1–0.7 (longest ones usually 0.3–0.4) mm, 1–8(–12)/sq. mm. **Inflorescences** remaining hemispheric; peduncles about 0.5 to 1.5 × leaf length. **Proximal bracts** spatulate, oblanceolate, or oblong-oblanceolate, occasionally oblong-elliptic to broadly elliptic, (3.5–)5–10 mm long, 1.2–3 mm wide, widest in distal half (often just above middle), occasionally at or just below middle, with 3 veins from the base, appressed or spreading, persisting and reflexed from base in fruit; apex obtuse to acute; indument strigose, hardly ciliate, the longest hairs ≤ 0.5 mm. **Corolla** yellow to orange aging orange to orange-red; corolla tube 6–10 mm.

Distribution and habitat.—Mexico (central highlands to eastern slopes of the Sierra Madre Oriental, Pacific slope, and Isthmus of Tehuantepec) to northern Central America (only to central Guatemala?); thorn forest and schrubland; 0–2000 m.

Selected specimens examined: **MEXICO. Coahuila:** *Johnston 9325* (LL[di]); *Henrickson 18926* (NY); *Waterfall 16661* (SMU). **Colima:** *Gregory & Eiten 334* (BRIT). **Guerétero:** *Flyr 623* (SMU). **Guerrero:** *Mocktord & Rowell 2790* (SMU). **Michoacán:** *Turner 2024* (BRIT, SMU). **Neuvo León:** *Garcia 10* (SMU); *Pennell 16860* (NY); *Waterfall 13187* (SMU); *Waterfall 15312* (SMU[di]). **Oaxaca:** *King 1328* (NY); *King 1464* (NY); *King 1598* (NY); *Purpus 7306* (NY). **Puebla:** *Chiang et al. F-2610* (TEX); *Davis 211* (NY); *Martínez 21705* (TEX[di]). **Sinaloa:** *Gentry 11454* (LL); *Palmer 1511* (NY); *Rose et al. 13366* (NY). **Sonora:** *Wiggins & Rollins 138* (NY). **Tamaulipas:** *Smith Mex. 94* (LL[di]).

Presumed hybrids with: **2a/4a. L. horrida subsp. horrida or L. hirsuta subsp. hirsuta. MEXICO. Hidalgo:** *Cawrey 3* (BRIT). **18. L. urticoides. MEXICO. Coahuila:** *Henrickson 11352* (LL[di]); *Muller 3069* (LL[di]); *Reveal et al. 2604* (NY); *Wehbe 052* (TEX[di]); *Wynd & Mueller 88* (NY). **Neuvo León:** *Frye & Frye 2447* (NY); *Meyer & Rogers 2686* (NY); *Pringle 11670* (SMU). **Tamaulipas:** *Meyer & Rogers 2499* (NY); *Stanford et al. 2302A* (NY). **20. L. strigocamara. MEXICO. Tamaulipas:** *Kral 24799*, alternatively × *L. scabrida* (VDB). See also taxa **1e, 2a, 4a,** and **9i (as cv × 20)** and section on hybrid synonymy: **1e×10, 1e×2a×10, 1e×10/20, 2a×10, 4a×10, 10×1a/1e?,** and **10×2a/4a?**

11. Lantana ovatifolia Britton, Bull. New York Bot. Gard. 4:123. 1905. Type: BAHAMA ARCHIPELAGO. Grand Bahama: Feb 1905, *Britton & Millspaugh 2450* (holotype: NY!; isotype: F!).

Shrubs lax and trailing, sparse; stems 0.3–1 m; branches prostrate, few; twigs, peduncles and often petioles moderately strigose, the hairs 0.2–1.5 mm. **Leaf-blades** ovate to ovate-elliptic, 2–6 cm long, the length 1.2–1.7 × width, not nigrescent, papery to subcoriaceous, pinninerved; base rounded to tapering onto petiole mostly from proximal third; apex acute to obtuse or rounded; marginal teeth 8–18 per side, rounded to acute, often appressed, with sinuses 0.7–1.5 mm deep; adaxial surface lustrous, antrorsely strigose to scabrous (due to loss of deciduous longer hairs), the hairs occurring on veins and intervening tissue (sometimes just center of areoles), 0.2–1 mm, 2–7/sq. mm, noticeably vitreous-pustulate, the circular bases 0.3–0.5 mm in diam.; abaxial surface slightly lighter or duller green than adaxial surface, antrorsely strigose-scabrous to nearly glabrous, with the strigae scattered on veins and veinlets, 0.2–1 (longest ones usually 0.4–0.8) mm, 2–7/sq. mm. **Inflorescences** remaining hemispheric; peduncles about 1–1.5 × leaf length. **Proximal bracts** spatulate or oblanceolate, 6–12 mm long, 1–3 mm wide, widest in distal half, with 3 veins from the base, appressed or spreading,

persisting and reflexed from base in fruit; apex obtuse to acute; indument strigose, hardly ciliate, the longest hairs ≤ 0.6 mm. **Corolla** yellow aging to a dark yellow or yellow-orange; corolla tube 6–10 mm.

Distribution and habitat.—Northern Bahama Archipelago; limestone pinelands with open or low shrubby understory; 0–25 m.

In certain respects *Lantana ovatifolia* is rather similar to *L. kingii*. However, as a narrow endemic with a narrow range of variation, it is best kept as a distinct species. This is further supported by its distribution, which is oddly disjunct from that of *L. kingii*. See Sanders (1987a) for detailed discussion and illustration.

Selected specimens examined: **BAHAMA ARCHIPELAGO. Grand Bahama:** *Brace 3686* (NY); *Correll & Popenoe 45402* (FTG, NY, SMU); *Correll & Kral 42892* (FTG, VDB); *Correll & Kral 42946* (FTG, VDB).

12. Lantana nivea Vent., Jard. Malmaison t.8. 1804. LECTOTYPE: icon in Vent., Jard. Malmaison t.8. 1804.

Shrubs lax, rounded and open, sometimes forming treelets; stems 0.5–4 m; branches ascending or divaricate, several to numerous; twigs, peduncles and often petioles thinly to moderately strigillose, setulose, or scabridulous, the hairs 0.03–0.4(–0.7) mm. **Leaf-blades** ovate, lanceolate or elliptic, 3–12 cm long, the length sometimes of those subtending inflorescences distinctly reduced (unique to this species), (1.5–)1.7–3(–3.6) × width, nigrescent, membranous to papery, triplinerved; base attenuately tapering onto petiole from widest point or abruptly narrowed to an often asymmetric, attenuate or cuneate petiolar wing; apex attenuate, acuminate, or acute; marginal teeth (13–)18–40 per side, obtuse, rounded, or acute, usually appressed, sometimes spreading at tip, with sinuses 0.2–1 mm deep; adaxial surface lustrous, antrorsely strigose to scabrous or scabridulous, the hairs occurring on veins and intervening tissue, 0.03–0.5 mm, 10–60/sq. mm, often with conspicuous vitreous or whitened pustulate bases 0.1–0.3 mm diam.; abaxial surface slightly lighter or duller green than adaxial surface, antrorsely strigillose to strigose-scabrous, with the strigae scattered on veins and veinlets and sometimes on intervening tissue, 0.03–0.4(–0.7) mm, 10–60/sq. mm. **Inflorescences** sometimes 2 per leaf axil, hemispheric but receptacle often elongating by slight separation or prolonged initiation of nodes and becoming naked below the hemispheric flower cluster at apex; peduncles 0.5–1.2 × leaf length. **Proximal bracts** narrowly triangular, lanceolate or linear-lanceolate, occasionally oblanceolate, 2.5–7(–10) mm long, 0.6–1.5 mm wide, widest at very base, proximal third, or occasionally distal third, with 3 veins from the base, appressed or spreading, usually deciduous after flowering; apex acute, attenuate, or subulate; indument strigillose-scabridulous, hardly ciliate, the longest hairs ≤ 0.5 mm. **Corolla** white aging white, pale pink or light blue, or opening pink, cream or yellow aging cream, yellow or orange infused with purple, pale yellow throat usually developed and fading with age; corolla tube 7–12 mm.

Distribution and habitat.—Eastern and southeastern Brazil; cultivated world-wide, escaped pantropically; understory and disturbance openings and man-made grasslands in tropical humid forest, occasionally in dry forest; 0–1500 m.

KEY TO THE SUBSPECIES OF *LANTANA NIVEA*

1. Corollas opening white aging white, bluish, or pale pink, or opening pink aging light purple; strigae of adaxial leaf surface 0.03–0.3 mm long, those under 0.2 mm dominating and appearing as ascending conical rough points; strigae of abaxial surface 0.03–0.3 mm or less long, never with filiform straight hairs to 0.3 mm mixed in _____ **a. subsp. nivea**

1. Corollas opening pink, cream or yellow, aging cream, yellow or orange infused with purple; strigae of adaxial leaf surface 0.05–0.5 mm long, the longer ones dominating; strigae of abaxial surfaces 0.05–0.7 mm long (mostly 0.4–0.5 mm), often with scattered filiform straight hairs to 0.3 mm mixed in _____ **b. subsp. mutabilis**

12a. Lantana nivea subsp. **nivea.** *Camara aculeata* (L.) Kuntze [var. *subinermis* Kuntze] f. *nivea* (Vent.) Kuntze, Revis. Gen. Pl. 2:503. 1891. nom. illeg. (see taxon 1f). *Lantana aculeata* L. f. *nivea* (Vent.) Voss, Vilm. Blumengärtn. ed.3, 1:823. 1894. *Lantana camara* L. var. *nivea* (Vent.) L.H. Bailey, Cycl. Amer. Hort. [L.H.Bailey] 883. 1900.

Lantana triplinervia Turcz., Bull. Soc. Imp. Naturalistes Moscou 36:205. 1863. TYPE: JAVA. [MOJOKERTO:] Japan, cult., *Göring* 225 (HOLOTYPE: KW[di!]).

Lantana minasensis Moldenke, Phytologia 2:138. 1946. *Lantana triplinervia* Turcz. var. *minasensis* (Moldenke) Moldenke, Phytologia 28:403. 1974. TYPE: BRAZIL. MINAS GERAIS: Viçosa, 9 Mar 1930, *Mexia 4448a* (HOLOTYPE: NY!; ISOTYPES: K[di!], MO!, TEX!).

Lantana camara L. var. *alba* Moldenke, Phytologia 5:132. 1955. *Lantana camara* L. f. *alba* (Moldenke) Moldenke, Phytologia 45:296.

1980. *Lantana aculeata* L. f. *alba* (Moldenke) I.E. Méndez, Willdenowia 32:289. 2002. (Misapplied probably to *Lantana* Callowiana Hyb. 'Cream Carpet') TYPE: INDIA. West BENGAL: Kharacpur, cult., *Sahni s.n.* (HOLOTYPE: LL!).

Lantana morii Moldenke, Phytologia 41:449.1979. TYPE: BRAZIL. BAHIA: Camacã, 14 Jul 1978, *Santos & Mattos 3304* (HOLOTYPE: LL!; ISOTYPE: NY!).

Leaf-blades with the indument of the adaxial surface composed of strigae and rough points, 0.03–0.3 mm; indument of the abaxial surface composed only of strigae 0.03–0.3 mm, never with short, straight filiform hairs to 0.3 mm mixed in. **Inflorescences** hemispheric but receptacle often elongating by slight separation or prolonged initiation of nodes and becoming naked below the hemispheric flower cluster at apex. **Corolla** white aging white, bluish or pale pink, or pink aging light purple.

Distribution and habitat.—Eastern and southeastern Brazil; cultivated world-wide, sometimes escaped pantropically; understory and disturbance openings and man-made grasslands in tropical humid forest, occasionally in dry forest; 0–1500 m.

Many of the native collections have narrowly elliptic leaf-blades. However, other native collections vary toward having the more ovate or lanceolate blades typically seen in cultivated plants of the species (e.g., the type specimens of *Lantana nivea* and *L. triplinervia*). There is a tendency, especially in the collections from Bahia, for a marked reduction in size of leaves subtending the inflorescences, resulting in a corymb-like arrangement of capitula.

Selected specimens examined: **AUSTRALIA. Queensland:** *McAndrew 32* (BRIT). **BRAZIL. Bahia:** *Mori et al. 10266* (LL); *Sieber s.n. 1826* (BR[di]); *Silva 58360* (NY, US). **Distrito Federal:** *Duarte & Pereira 4740* (US). **Minas Gerais:** *Hatschbach 31331* (US); *Irwin 2112* (NY, US). **Rio de Janeiro:** *Araujo 5054* (NY); *Brade 24153* (NY); *Carauta et al. (Herb. 18132)* (LL); *Nee 3389* (US); *Pereira et al. 4383* (NY). **MEXICO. Distrito Federal:** cult,. *Bonpland s.n.* (P[2di]). **SRI LANKA. North Central:** cult., *Moldenke et al 28233* (US).

Presumed hybrids with: **14. L. viscosa. BRAZIL. Bahia:** *Belena 3644* (F); *Harley 21362* (MO, NY); *Harley 21404* (NY); *Harley 21536* (NY); *Harley 21658* (NY); *Harley 21927* (NY); *Hatschbach 46372* (LL[di]); *Irwin et al. 27777* (LL[di]). **17. L. planaltensis. BRAZIL. Bahia:** *Harley et al. 21617* (US). **Minas Gerais:** *Anderson 9142* (F, US); *Mexia 5436* (F, NY). **Rio de Janeiro:** *Segadas-Vianna et al. 593* (SMU). **20. L. strigocamara. U.S.A. HAWAI'I. Oahu:** *Topping 3009* (NY). See also taxa **2c** and **4b** and section on hybrid synonymy: **4b×12a, 12a×14.**

12b. Lantana nivea subsp. **mutabilis** (Hook.) R.W. Sanders, Sida 22:395. 2006. BASIONYM: *Lantana nivea* Vent. var. *mutabilis* Hook., Bot. Mag. n.s., 5:t. 3110. 1831. *Camara aculeata* (L.) Kuntze [var. *subinermis* Kuntze] f. *mutabilis* (Hook.) Kuntze, Revis. Gen. Pl. 2:503. 1891. nom. illeg. *Camara aculeata* (L.) Kuntze [var. *normalis* Kuntze] f. *mutabilis* (Hook.) Kuntze, Revis. Gen. Pl. 2:503. 1891. nom. illeg. *Lantana aculeata* L. f. *mutabilis* (Hook.) Voss, Vilm. Blumengärtn. ed.3, 1:823. 1894. *Lantana camara* L. var. *mutabilis* (Hook.) L.H. Bailey, Cycl. Amer. Hort. [L.H.Bailey] 884. 1900. *Lantana camara* L. f. *mutabilis* (Hook.) Moldenke, Phytologia 45:296. 1980. LECTOTYPE: icon in Hook., Bot. Mag. n.s., 5:t. 3110. 1831. EPITYPE, here designated: SRI LANKA. CENTRAL PROV.: Dambulla, roadsides and fencerows, 23 Jan 1974, *Moldenke et al. 28218* (US!; ISOEPITYPE: LL!).

Lantana incarnata Raf., Sylva Tellur. 83. 1838. TYPE: Unknown.

Lantana amethystina Otto & A. Dietr., Allg. Gartenzeitung 9:370. 1841. TYPE: Unknown.

Lantana triplinervia Turcz. f. *armata* Moldenke, Phytologia 36:49. 1977. TYPE: BRAZIL. SÃO PAULO: Pariquera-açu, 18 Feb 1965, *Eiten & Clayton 6194* (HOLOTYPE: US!; ISOTYPE: K[di!]).

Leaf-blades with the indument of the adaxial surface composed of strigae, 0.05–0.5 mm; indument of the abaxial surface composed of strigae, 0.05–0.7 (longest ones mostly 0.4–0.5) mm, often with short, straight filiform hairs to 0.3 mm mixed in but not dominant or codominant. **Inflorescences** remaining hemispheric; receptacle rarely elongating and becoming naked below. **Corolla** opening creamy white or pink, aging cream, yellow or orange infused with purple or opening yellow aging purple.

Distribution and habitat.—Probably of cultivated hybrid origin, cultivated world-wide and escaped pantropically (especially in Australia), but also collections from southeastern Brazil apparently of natural hybrid origin; understory and disturbance openings and man-made grasslands in tropical humid forest, occasionally in dry forest; 0–1500 m.

Selected specimens examined: **AUSTRALIA. Queensland:** *Day 53* (BRIT). **BRAZIL. Goiás:** *Irwin et al. 25204* (NY). **Rio de Janeiro:** *Carauta & Araujo 2244* (LL[di]); *Góes 64* (NY); *Sarahyba 80* (NY); *Segadas-Vianna 4053* (SMU). **BURUNDI. Bujumbura:** *Lewalla 5717* (MO). **COLOMBIA. Caldas:** cult., *López-Palacios 4023* (LL). **DOMINICAN REPUBLIC. La Vega:** *Ososki & Rodriguez 249* (BRIT). **GOLD COAST. Kumari:** *Darko 598* (MO). **TRINIDAD & TOBAGO.** *Smith Tr. 2* (LL[di]); *Smith Tr. 24* (LL[di]). **MEXICO. Tabasco:** *Taylor & Taylor 12574* (BRIT). **PARAGUAY. Canendiyú:** *Zardini 48550* (MO). **SIERRA LEONE. Freetown:** *Johnston s.n. 31 Jan 1882* (MO); *Morton SL185* (MO).

SOUTH AFRICA. Free State: *Day 5* (BRIT). **Mpumalanga** *Day 19* (BRIT). **SRI LANKA. Central:** *Moldenke et al 28159* (US); *Moldenke et al. 28262* (LL). **TANZANIA. Tanga:** *Sallu 383* (BRIT). **U.S.A. Florida. Dade Co.:** cult., *Avery 1867* (NY).

Presumed hybrids with: **2/4. L. horrida or L. hirsuta. AUSTRALIA. Tasmania:** *Crosby & Doore 162* (SMU). **13. L. cujabensis. AUSTRALIA. Queensland:** *Day 50*, identification uncertain (BRIT). **BRAZIL. Bahia:** *Hage 365* (LL[di]). **17. L. planaltensis. BRAZIL. Minas Gerais:** *Heringer & Eiten 15237* (F, US); *Mexia 5440* (US). **São Paulo:** *Hoehne 2759* (US); *Hoehne 6168* (US); *Moldenke & Moldenke 19905* (SMU). **20. L. strigocamara. AUSTRALIA. Queensland:** *Day 28* (BRIT). See also taxa **1c, 1d, 1e, 1f, 2a, 2c, 4a, 4b,** and **9i (as cv.)** and section on hybrid synonymy: **1d×12b, 2c×12b,** and **12b×17.**

13. Lantana cujabensis Schauer, Prodr. [A.P. de Candolle] 11:599. 1847.

Type: BRAZIL. Matto Grosso: Cuiabá, Jul 1833, *Manso s.n., Martius Fl. Bras. 1026* (lectotype: M, barcode M0111650[di!]; isotypes: BR[2,di!], G[di!], G-DC[di!], MO!, NY!,). Remaining syntypes: BRAZIL.:Rio Negro, *Martius s.n.* (M[di!]). PERU: *Poeppig 1485* (G[di!]).

Lantana riedeliana Schauer, Prodr. [A.P. de Candolle] 11:601. 1847. Type: BRAZIL [probably from western Matto Grosso, 1826–1828 (Urban 1906)], *Riedel s.n.* (holotype: LE, n.v.).

Lantana tenuifolia Rusby, Phytologia 1:74. 1934. Type: BOLIVIA. [La Paz:] Bopi River, 11 Sep 1921, *Rusby 653* (holotype: NY!).

Lantana cujabensis Schauer var. *parvifolia* Moldenke, Phytologia 9:186. 1963. Type: PERU. La Libertad: Otuzco, 1 Jul 1951, *Ángulo & López 1346* (holotype: LL, not located).

Lantana cujabensis Schauer f. *scabrifolia* Moldenke, Phytologia 46:58. 1980. Type: BOLIVIA. La Paz: cataracts of Bopi River, 6 Sep 1921, *Rusby 715* (holotype: NY!).

Shrubs rounded and ± open, lax, or subscandent; branches ascending or clambering, several to few, occasionally herbaceous; twigs, peduncles and often petioles glabrescent to thinly setose or scabrous, the hairs (0.1–)0.3–0.5(–1) mm. **Leaf-blades** ovate, lanceolate, elliptic, or narrowly oblong, (3–)4–12(–16) cm long, the length 1.3–2.5(–4) × width, nigrescent or not, papery to subcoriaceous, triplinerved to pinninerved; base rounded or truncate and abruptly tapered onto petiole or cuneate and often forming an attenuate wing; apex acute, abruptly acuminate, or attenutate; margin with the teeth (15–)25–40 per side, rounded to acute, often appressed to strongly so and barely discernable, the sinuses 0.1–1.5 mm deep; adaxial surface dull to occasionally lustrous, antrorsely strigillose to strigose-pubescent, the hairs occurring on veins and intervening tissue, 0.1–0.4(–0.7) mm, 3–20/sq mm, not noticeably vitreous-pustulate, the circular bases of the strigae ca. 0.1–0.2 mm in diam; abaxial surface slightly lighter or duller green than adaxial surface, sometimes whitish green but not glaucous, antrorsely strigose-scabrous to nearly glabrous, with the strigae scattered on veins and veinlets, 0.1–0.6 mm, 3–10/sq mm. **Inflorescences** with peduncles 0.5– 2 × leaf length. **Proximal bracts** lanceolate, oblong, or ovate-elliptic, often subfoliaceous, (4–)6–20 mm long, 2–8 mm wide, widest in proximal to middle third, occasionally distal third, with 5–7 veins from the base, appressed to spreading, persisting and recurved or reflexed in fruit; apex acute, briefly acuminate, or obtuse, often rounded at very tip; indument thinly strigose, usually not distinctly ciliate, with longest hairs 0.1–0.6(–1) mm. **Corolla** yellow, orange, or light red aging reddish orange to bright red (or occasionally intense reddish purple); corolla tube 7–12 mm.

Distribution and habitat.—Brazil (westernmost Amazonia, southern and central Planalto), the Guianas, Venezuela, Colombia, Ecuador, Peru, Bolivia and Paraguay; understory and disturbance openings in tropical humid forest, occasionally in dry forest or hard-pan savannas; 100–3000 m.

Lantana cujabensis is variable with respect to leaf-blade shape and width (broadly ovate to narrowly elliptic-oblong) and marginal serration, outer bract length and width, and altitude preference. Apparently the type specimens of *L. cujabensis* and *L. riedeliana* represent the broad-leaved, toothed vs. narrow-leaved, subentire extremes, respectively; that of *L. tenuifolia* is intermediate. Different specimens exhibit all possible combinations, which do not correlate with geography, therefore, no infraspecific taxa are justifiable based on the sample studied.

Selected specimens examined: **BOLIVIA. Cochabamba:** *Jaramillo et al. 1212* (MO); *Ritter 1644* (MO); *Steinbach 644* (F, MO, NY, SMU); *Terán et al. 1927* (MO). **Santa Cruz**: *Guillén & Roca 3334* (F); *Steinbach 347* (NY, SMU); *Steinbach 794* (SMU). **BRAZIL. Acre:** *Albuquerque et al. 1366* (MO); *Santos et al. 49* (NY). **Amazonas**: *Maas & Maas 273* (MO). **Bahia:** *dos Santos & Barreto 65* (LL[di]). **Rondônia**: *Teixeira et al. 331* (MO). **COLOMBIA. Amazonas**: *Gillett & Sampson 16497* (MO). **Boyacá**: *Lawrance 209* (F). **Chocó:** *Díaz 3478* (MO). **Meta**: *Betancur 1336* (MO); *Ohba et al. 671* (MO). **Putamayo:** *Cuatrecasas 11189* (F). **ECUADOR. Cotopaxi**: *Holm-Nielsen et al. 2877* (F); *Holm-Nielsen et al. 3016* (F). **Napo:** *Abbott 15637* (MO); *Campos 135* (F); *Cerón 278* (MO); *Croat & Hannon 93505* (MO); *Ponce & Ghia 320* (MO). **PERU. Amazonas:** *Castro et al. 18843* (MO); *Castro et al. 18983* (MO); *Lewis et al. 18100* (MO). **Cusco:** *Huamantupa et al. 4024* (MO). **Huánuco:** *Macurdy 1007* (F, MO); *Schunke 2992* (F). **Loreto:** *Fosberg 29017* (F); *Fosberg 29104* (F); *Gentry et al. 15599* (F); *Rimachi 6589* (F, MO). **Madre de Dios:** *Gentry et al.*

26739 (F). **Pampayacu:** *Macbride 5052* (F). **Pasco:** *Smith 2081* (F). **VENEZUELA. Amazonas:** *Fernández & Yáñez 745* (MO); *Guánchez 2132* (MO); *Liesner 4021* (MO); *Liesner 7454* (MO). **Guárico:** *Ramírez 2027* (NY). **Mérida:** *López-Palacios 2695* (LL).

Presumed hybrids with: **15. L. micrantha. BOLIVIA. Chuquisaca:** *Jiménez & Flores 777* (MO). **17. L. planaltensis. BRAZIL. Minas Gerais:** *Gentry et al. 49588* (MO), identification uncertain. **PARAGUAY. Itapúa:** *Pérez 179* (MO). **19. L. paraensis. SURINAME: Sipaliwini:** *Miller et al. 9367* (MO). **VENEZUELA. Bolívar:** *Sanoja 2343* (MO). See also taxa **1d, 2c, 4b, 9i (as cv.)** and **12b** and section on hybrid synonymy: **2c×13, 4b×13,** and **15×13/20?**

D. Lantana sect. **Lantana** series **Spicatae** R.W. Sanders, ser. nov. TYPE: *Lantana viscosa* Pohl ex Schauer

Adaxial leaf surfaces strigose-villosulous to setose-villous, the hairs up to 2.5 mm; abaxial leaf surfaces setose or pilose, often densely so, the hairs occurring on veins and non-innervated tissue, setiform or filiform, 0.2–2.0 mm. **Inflorescences** initially hemispheric becoming short-cylindric by prolonged initiation of flowers or elongation of internodes.

14. Lantana viscosa Pohl ex Schauer, Prodr. [A.P. de Candolle] 11:601. 1847. *Camara viscosa* (Pohl ex Schauer) Kuntze, Revis. Gen. Pl. 2:504. 1891. TYPE: BRAZIL: Goiás, *Pohl 1876 & 2680 (D.n. 181), left hand specimen* (LECTOTYPE: W[photo id. 1506]!). Remaining SYNTYPES: BRAZIL: Goiás, *Pohl 1876 & 2680 (D.n. 181), right hand specimen* (W[photo id. 1506]!); BRAZIL: Goiás, *Pohl s.n.* (B, destroyed [Macbride Neg. 17492!], BR[photo at F!], F!, K[2,di!], W[photo id. 1505]!).

Shrubs erect or rounded and open to lax and subscandent; stems 1–3 m; branches ascending and numerous to clambering and few; twigs, peduncles and often petioles sparsely setose but viscid with dense understory of conspicuous stalked glands mixed with short hairs, the setae 1–2 mm, the stipitate glands and short hairs, ca. 0.5 mm. **Leaf-blades** broadly ovate, ovate, or ovate-elliptic, 2–8 cm long, the length 1.4–1.8(–2.2) × width, not nigrescent, papery, pinninerved; base usually rounded to truncate, sometimes broadly cuneate or subcordate, briefly narrowly cuneate onto petiole at very base; apex usually abruptly acuminate, sometimes acute; marginal teeth (10–)20–35 per side, acute to rounded, spreading to ascending, rarely appressed with tips recurved, with sinuses (0.3–)0.6–1.5 mm deep; adaxial surface dull, setose to villous, the hairs occurring on veins and intervening tissue, longer ones 1–1.5 mm or more (shorter ones ±. 0.5 mm, often mixed glandular and eglandular), 30–70/sq. mm, not noticeably vitreous-pustulate, the circular bases of the hairs ca. 0.1–0.2 mm in diam.; abaxial surface slightly lighter or duller green than adaxial surface, setose to villous, the hairs on all veins and intervening tissue, longer ones 1–1.5 mm or more (understory hairs 0.3–0.8 mm, these often mixed glandular and eglandular), 50–150/sq. mm. **Inflorescences** occasionally 2 per leaf axil, becoming short-cylindric by prolonged initiation of flowers; peduncles 0.5–1.3 × leaf length. **Proximal bracts** lanceolate or elliptic to ovate-elliptic, (2.5–)4–7 mm long, 1.5–3 mm wide, widest in proximal or middle third, with 3 veins from the base, ± spreading, persisting (proximally ± cupped around enlarging fruit) and becoming reflexed (± distally only) in fruit; apex abruptly acuminate with prolonged tip to caudate; indument setose-pilose, usually ciliate, often also stipitate-glandular, the longest hairs 0.7–1.5 mm. **Corolla** reddish purple to pale pink, often with white or yellow throat, occasionally white; corolla tube 5–10 mm.

Distribution and habitat.—Venezuela, Brazil (northern, eastern, and southern), Paraguay, Bolivia, and Peru, possibly also Ecuador, Colombia, and the Guianas; widely distributed but infrequent; openings in tropical evergreen forest, tropical savanna with gallery forest, and areas of dense woodland, shrubland, and grassland; 100–1200 m.

Selected specimens examined: **BRAZIL. Distrito Federal:** *Heringer et al 7087* (NY). **Pará:** *Strudwick & Sobel 4236* (LL[di], NY). **Pernambuco:** *Figueiredo et al. 38* (US). **PARAGUAY. Amambay:** *Zardini & Guerrero* (NY). **VENEZUELA. Bolívar:** *Steyermark et al. 115523* (NY).

Presumed hybrids with: **15. L. micrantha. PARAGUAY. Cordillera:** *Mereles & Degen 5522* (MO). See also taxa **2c, 4b,** and **12a** and section on hybrid synonymy: **12a×14.**

15. Lantana micrantha Briq., Annuaire Conserv. Jard. Bot. Gèneve 7–8:299. 1904. TYPE: PARAGUAY: Ascunción, Apr 1874, *Balansa 1039* (HOLOTYPE: G[di!]; ISOTYPES: K[di!], P[2,di!]).

Shrubs erect or rounded, open; stems 0.5–2 m; branches ascending and several; twigs, peduncles and often petioles moderately to densely setulose, setose, pilose, or also stipitate-glandular, the hairs usually 0.5–1.2 mm (these sometimes lacking), mixed with shorter glandular and eglandular hairs about 0.2–0.3 mm. **Leaf-blades**

broadly ovate, ovate-deltate, elliptic-ovate, or elliptic-lanceolate, (1.5–)3–9 cm long, the length 1.3–2 × width, not nigrescent, papery, usually pinninerved, sometimes triplinerved; base usually rounded to truncate, sometimes broadly cuneate or cordate, briefly narrowly cuneate onto petiole at very base; apex usually acute, sometimes abruptly acuminate or rounded; marginal teeth 10–35 per side, rounded, obtuse, or sometimes acute, usually spreading, with sinuses 0.4–1 mm deep; adaxial surface dull, antrorsely strigillose to strigose-pilose, the hairs occurring on veins and intervening tissue, the thin canopy of hairs only 0.2–0.5(–0.9) mm with understory of shorter hairs sometimes developed, 20–100/sq. mm, not noticeably vitreous-pustulate, the circular bases of the strigae 0.05–0.2 mm in diam.; abaxial surface duller green than adaxial surface, moderately densely (occasionally sparsely) pilose, the hairs on all veins and intervening tissue, 0.3–0.5 mm, all about same length, 40–250/sq. mm. **Inflorescences** occasionally 2 per leaf axil, elongating in fruit by expansion of internodes; peduncles 0.5–1.2 × leaf length. **Proximal bracts** ovate-elliptic to oblong-elliptic or -lanceolate, (2.5–)3–4.5(–6) mm long, (1–)1.5–2 mm wide, widest usually near middle, with 3 veins from the base, appressed or ascending, deciduous in fruit or persisting and becoming reflexed from base; apex acute to obtuse, sometimes abruptly acuminate to briefly attenuate; indument pilose to strigillose, not ciliate, the longest hairs 0.2–0.5 mm. **Corolla** pink to rose-red or reddish purple, yellowish throat developed at least in some cases; corolla tube 2–4 mm (briefly or not exserted beyond bract).

Distribution and habitat.—Central Bolivia, Paraguay, northern Argentina, and possibly southern Brazil; savanna, thickets, shrubland, thorn forest, tropical semi-evergreen forest, gallery forest; sandy or alluvial soil; 150–1500 m.

Selected specimens examined: **ARGENTINA. Corrientes:** *Pedersen 1328* (NY). **Formosa:** *Morel 781* (F). **Jujuy:** *Aroque & Barkley 19Ar525* (F); *Burkart et al. 30582* (MO). **Salta:** *Novara 3333* (MO). **BOLIVIA. Chuquisaca:** *Flores & Jiménez 69* (MO). **Santa Cruz:** *Nee 40029* (BRIT, NY); *Nee 46550* (BRIT); *Nee 47725* (BRIT). **Tarija:** *Fiebrig 2169* (F). **PARAGUAY. Central:** *Zardini & Velázquez 18174* (MO). **Cordillera:** *Molas & Brunner 948* (MO); *Schinini 9211* (F); *Zardini & Velázquez 20996* (MO). **Paraguarí:** *Zardini & Velázquez 15584* (MO). **San Pedro:** *Zardini et al. 48269* (MO); *Zardini et al. 48432* (MO).

Presumed hybrids with: **17 L. planaltensis. PARAGUAY. Paraguarí:** *Zardini & Pérez 2844* (MO). See also taxa **2c, 4b, 13, 14** and **17**, and section on hybrid synonymy: **4b×15**, and **15×13/20?**

SPECIES OF PRESUMED HYBRID ORIGIN BETWEEN SPECIES OF DIFFERENT SERIES

16. Lantana bahamensis Britton, Bull. New York Bot. Gard. 3:450. 1905. TYPE: BAHAMA ARCHIPELAGO. NEW PROVIDENCE: near Ft. Montague, 23 Aug 1904, *Britton & Brace 174* (HOLOTYPE: NY!; ISOTYPES: F!, US!).

Shrubs erect or rounded, open; stems 0.5–2.5 m; branches ascending or spreading, several; twigs, peduncles and often petioles glabrescent to strigose, the hairs 0.05–0.5 mm. **Leaf-blades** ovate-triangular, lanceolate-triangular, or elliptic, (1–)2–7 cm long, the length (1.3–)1.7–3.3 × width, often nigrescent, papery to subcoriaceous, triplinerved; base rounded or tapering from below middle of blade, usually shortly, narrowly cuneate onto petiole at very base; apex attenuate, acute or obtuse, or rarely rounded; marginal teeth 9–25 per side, rounded to acute, often appressed, with sinuses 0.3–0.5(–1) mm deep; adaxial surface lustrous, thinly scabrous, the hairs occurring on veins and center of areoles, 0.1–0.3 mm, 2–10/sq. mm, noticeably vitreous-pustulate, the circular bases 0.2–0.5 mm in diam.; abaxial surface slightly lighter or duller green than adaxial surface, mixed strigose-scabrous and pilose to nearly glabrous, with the strigae scattered on veins and veinlets, with filiform hairs in crevises along midrib and main veins, 0.1–0.3 mm, 3–40(–60)/sq. mm. **Inflorescences** remaining hemispheric; peduncles 0.5–1.2 × leaf length. **Proximal bracts** elliptic- or oblong-lanceolate to oblanceolate or spatulate (occasionally 1 or 2 outermost bracts subfoliar), 2–6 mm long, 0.5–1.5(–2.0) mm wide, widest in distal or middle third, or at proximal third, with 3 veins from the base, spreading or recurved, usually deciduous after flowering; apex acute to rounded; indument strigillose-scabridulous, hardly ciliate, the longest hairs 0.2–0.3(–0.5) mm. **Corolla** opening yellow or yellow-orange aging orange or red-orange; corolla tube 4–9 mm.

Distribution and habitat.—Central and southern Bahama Archipelago; thorn and sclerophyll shrubland/woodland, thickets and disturbance openings on thin calcareous soils; 0–70 m.

Morphological near intermediacy suggests that *Lantana bahamensis* originated from hybridization be-

tween the more or less sympatric taxa *L. camara* subsp. *camara* and *L. splendens*, probably prior to European colonization or perhaps human habitation. Moreover, the range of variation is narrower than expected for a hybrid swarm, and the distribution extends beyond the area of sympatry.

Selected specimens examined: **BAHAMA ARCHIPELAGO. Cat Island:** *Britton & Millspaugh 5763* (NY); *Correll 46083* (FTG, NY); *Correll 46098* (FTG, SMU). **Eleuthera:** *Lewis 7232 pp.* (FTG). **Grand Caicos:** *Gillis 12317* (LL). **Great Exuma:** *Correll & Correll 42298* (FTG, NY); *Correll & Correll 42465* (FTG, NY). **Long Island:** *Correll 48177* (FTG, LL); *Hill 2205* (LL, NY). **New Providence:** *Britton 3441* (NY); *Correll 45798* (FTG, NY); *Gillis 8364* (LL).

Presumed hybrids with: **20. L. strigocamara. BAHAMA ARCHIPELAGO. Eleuthera:** *Lewis 7232 pp.* (NY). **Watling's Island:** *Wilson 7331.* (NY). See also taxon **1a** and section on hybrid synonymy: **1a×16.**

17. Lantana planaltensis R.W. Sanders, nom. & stat. nov. *Lantana minasensis* Moldenke var. *hispida* Moldenke, Phytologia 23:454. 1972. *Lantana triplinervia* Turcz. var. *hispida* (Moldenke) Moldenke, Phytologia 28:402. 1974. TYPE: ARGENTINA. CORRIENTES: Santo Tomé, 3 Dec 1970, *Krapovickas et al. 17030* (HOLOTYPE: LL!).

Shrubs erect or rounded, open; stems 0.5–4 m; branches ascending, several; twigs, peduncles and often petioles moderately to densely puberulent or setulose, sometimes with stipitate glands intermixed, the hairs mostly 0.1–0.4 mm, occasionally up to 0.8, rarely to 1 mm. **Leaf-blades** ovate, lanceolate or elliptic, 2–10 cm long, the length (1.4–)1.7–2.7 × width, ± nigrescent, papery, triplinerved; base attenuate onto petiole from widest point or rounded and abruptly narrowed to an often attenuate or cuneate petiolar wing; apex usually acuminate, sometimes acute; marginal teeth (14–)20–35(–50) per side, rounded, obtuse, or acute, spreading to appressed, then sometimes tip recurved, with sinuses 0.3–1.2 mm deep; adaxial surface dull to somewhat lustrous, antrorsely strigillose to strigose-pilose, the hairs occurring on veins and intervening tissue, forming a thin canopy of hairs only 0.3–0.5(–0.8) mm with understory of shorter hairs often well developed, (2–)20–80(–200)/sq. mm, sometimes vitreous-pustulate, the circular bases of the strigae ca. 0.1–0.3 m in diam.; abaxial surface slightly lighter or duller green than adaxial surface, moderately densely to sparsely pilose, if some strigiform hairs mixed in, then filiform hairs dominating, the hairs on all veins and intervening tissue, 0.05–0.5 mm, all about same length (or those on areoles evenly much shorter), occasionally a few along midrib to 0.8 mm, 20–150/sq. mm. **Inflorescences** occasionally 2 per leaf axil, remaining hemispheric; peduncles 0.2–0.7(–1.3) × leaf length. **Proximal bracts** linear-, narrowly elliptic-, or lanceolate-oblong (occasionally 1 or 2 outermost bracts subfoliar or narrowly spatulate and distinctly longer), 4–7 mm long, 0.5–1.5 mm wide, widest in proximal or middle third, with 3 veins from the base, appressed or spreading, usually deciduous after flowering; apex acute to attenuate, often rounded at very tip; indument pilose to strigillose, hardly ciliate, the longest hairs 0.2–0.3(–0.5) mm. **Corolla** opening yellow or white with yellow throat, aging to dark yellow, orange, or red, or opening white becoming infused with pink, blue, or purple, or opening pink, aging pink, purple, or white with yellow throat (those opening with yellowish pigments becoming infused with purple also expected); corolla tube 7–12 mm.

Distribution and habitat.—The Planalto of eastern and southern Brazil, northeastern Argentina, and eastern Paraguay; openings in tropical semi-evergreen forest, tropical savanna with gallery forest or areas of dense woodland, shrubland, and grassland; 0–1000 m.

The intermediacy and rather wide variation in characters that are less variable in other species suggests *Lantana planaltensis* to have arisen by hybridization between *L. horrida* subsp. *tiliifolia* and *L. nivea* subsp. *nivea*. Furthermore its geographic distribution far exceeds the zone of contact of the probable parental species, verifying its status as an independent species. The new name is required because *L. hispida* Kunth (= *L. horrida*) already exists. Most of the plants annotated by H.N. Moldenke and me as "*Lantana triplinervia*" are included here.

Selected specimens examined: **ARGENTINA. Buenos Aires:** *Cabrera 7020* (SMU, VBD); *Krapovickas 2891* (SMU). **Misiones:** *Ekman 1985* (F); *Schwarz 3635* (SMU); *Schwarz 4074* (F); *Zuloaga et al. 6633* (MO). **BRAZIL. Distrito Federal:** *Heringer 13834* (NY); *Heringer et al. 4253* (NY). **Goiás:** *Anderson 9479* (NY). **Mato Grosso do Sul:** *Hatschbach 49116* (LL[di]); *Salvador 3094* (US). **Minas Gerais:** *Hatschbach 25966* (US); *Hatschbach 46673* (NY); *Mexia 5436 p.p.* (US). **Paraná** *Hatschbach 11224* (F); *Hatschbach 16038* (VBD); *Hatschbach 24154* (US); *Hatschbach 41549* (NY); *Wasum 2498* (BRIT); *Winder 001* (BRIT). **Peranambuco:** *Silva et al. 82* (MO, US). **Rio de Janeiro:** *Carauta 3430* (LL[di]). **Rio Grande do Sul:** *Macedo 5507* (NY); *Sehnen 9562b* (US); *Wasum et al. 1425* (US); *Winder 006* (BRIT). **Santa Catarina:** *Reitz & Klein 1778* (F);

Winder 005 (BRIT). **São Paulo:** *Handro 2173* (NY); *Joly et al. 6778* (F); *Kuhlmann s.n. 25 Aug 1939* (US); *Romanic 689* (US). **PARAGUAY. Caazapá:** *Degan 99*, possibly with genes of *L. micrantha* (MO); *Mereles 2178* (MO). **Central:** *Fiebrig 954* (F). **Guairá:** *Jorgensen 3765*, location uncertain (F).

Presumed hybrids with: See also taxa **2c, 4b, 9i (as cv.), 12a, 12b, 13** and **15** and section on hybrid synonymy: **2c×17** and **12b×17.**

18. Lantana urticoides Hayek, Repert. Spec. Nov. Regni Veg. 2:162. 1906. TYPE: U.S.A. TEXAS: 1845–1846, *Lindheimer Fl. Tex. Exsic. No. 503* (LECTOTYPE, here designated: W[access. no. not recorded]!). Because *Exsic. No. 503* consists of two collection numbers (usually not identified on the sheets), which were mass collections, themselves mixed as to possibly including some hybrids, the duplicates should not be regarded as isotypes but as syntypes. Remaining SYNTYPES: U.S.A. TEXAS. Kerr Co?: "Upper Guadalupe River," Jun 1845 (*Lindheimer 384*) and Comal Co.: New Braunfels, Aug 1856 (*Lindheimer 306*), *Lindheimer Fl. Tex. Exsic. No. 503* (CAN, n.v., F!, GH[2]!, MO[2]! SMU!, UC!, W[access. no. 93332]!). U.S.A. TEXAS. Comal Co.: *Matthes N. Amer. Pl. 19* (W, not found).

Lantana horrida Kunth f. *latibracteata* Moldenke, Phytologia 38:498. 1978. TYPE: U.S.A. TEXAS. Jim Hogg Co.: 23 Mar 1962, *Alvarez et al. 7782* (HOLOTYPE: LL!).

Lantana urticoides Hayek var. *hispidula* Moldenke, Phytologia 39:424. 1978. TYPE: U.S.A. TEXAS. Medina Co.: 28 Oct 1952, *Correll 15206* (HOLOTYPE: US!; ISOTYPE: LL!).

Shrubs erect or rounded, open; stems 0.6–2 m; branches ascending, several to numerous; twigs, peduncles and often petioles thinly to densely setose, the hairs 0.1–1.8 mm, the longest 0.8–1.8 mm. **Leaf-blades** broadly ovate or ovate-deltate to rotund, (1–)2–9 cm long, the length 1–1.5 × width, not nigrescent or only somewhat so, membranous to papery, pinninerved; base rounded, truncate, or cordate; apex rounded to abruptly acute; marginal teeth 5–15 per side, acute to obtuse, spreading, with sinuses (1–)1.5–5 mm deep; adaxial surface dull to occasionally lustrous, scabrous-setose to villous, the hairs occurring on veins and intervening tissue, 0.1–1.5 (longest ones usually 0.7–1.5) mm, (2–)5–20/sq. mm, noticeably vitreous-pustulate or not, the circular bases of the hairs ca. 0.1–0.5 mm in diam.; abaxial surface slightly lighter or duller green than adaxial surface, thinly to moderately densely setose or setulose to pilose, the hairs on most veins and some intervening tissue, longest ones 1.5–2 mm on proximal portions of major veins, those increasingly distal gradually reduced (near margin ca. 0.7 mm), those on intervening tissue mostly 0.2–0.5 mm, 5–20/sq. mm. **Inflorescences** remaining hemispheric; peduncles 0.8–2.3 × leaf length (usually nearly twice when mature). **Proximal bracts** narrowly oblanceolate or spatulate to elliptic-oblong, (5–)7–12 mm long, (1–)1.5–3 (rare outermost one subfoliar to 5) mm wide, widest in distal half or near middle, with 3 veins from the base, appressed or spreading, persisting and reflexed from base in fruit; apex obtuse or acute; indument strigose, ciliate or not, the longest hairs 0.3–0.7 mm. **Corolla** opening yellow, aging to red-orange; corolla tube 7–12 mm mm.

Distribution and habitat.—Central and southern Texas, Mexico (Coahuila, Nuevo León, Tamaulipas), apparently cultivated and naturalized across the southwestern and southeastern United States from northern Texas to California and to Florida and North Carolina; open woodlands, brushland, thickets, and grasslands on calcareous clays or sandy soils; 0–1000 m.

Lantana urticoides likely originated by hybridization between *L. hirsuta* subsp. *hirsuta* and *L. kingii*, having developed greater frost tolerance and a more northerly distribution than either parental species.

Selected specimens examined: **MEXICO. Tamaulipas:** *Dominguez & McCart 8231* (SMU). **U.S.A. TEXAS. Aransas Co.:** *Uzzell 51* (US). **Comal Co.:** *Lindhemer 334 (May 1850)* (SMU). **Duval Co.:** *Mahler 5287* (SMU). **Live Oak Co.:** *Whitehouse 18366* (SMU). **Medina Co.:** *Chaves et al. 99* (SMU); **San Patricio Co.:** *Jones 83* (SMU). **Somervell Co.:** *Helm s.n. 9 May 1948* (SMU). **Starr Co.:** *Garza et al. 8470* (SMU). **Travis Co.:** *Hansen 26* (VDB); *Lundell & Lundell 8928* (SMU). **Uvalde Co.:** *Dickey 70* (SMU). **Willacy Co.:** *Lundell & Lundell 8751* (SMU).

Presumed hybrids with: **20. L. strigocamara. MEXICO. Coahuila:** *Havard s.n. May 1883* (US). **Nuevo León:** *Rodriguez 62* (SMU); *Dodge 100* (NY). **Tamaulipas:** *Berlandier s.n. 1836* (NY). **U.S.A. ALABAMA. Baldwin Co.:** *Kral 39530* (NY, VDB). **Crenshaw Co.:** *Diamond 11455* (BRIT[di]). **FLORIDA. Citrus Co.:** *Kral 4542* (SMU). **Marion Co.:** *Slaughter 13954* (BRIT[di], SMU). **Monroe Co.:** *Kral 53896* (VDB). **GEORGIA. Charlton Co.:** *Duncan 22077* (VDB). **LOUISIANA. Beauregard Par.:** *Thomas 153436* (BRIT, NY). **Winn Par.:** *Thomas 159711* (BRIT[di], NY). **SOUTH CAROLINA. Orangeburg Co.:** *Leonard et al. 5001* (VDB). **TEXAS. Blanco Co.:** *Sanders 5143* (SMU). **Cameron Co.:** *Hotchkiss 6244* (US). **Dallas Co.:** cult. *Niblack 50* (SMU). **Fayette Co.:** *Kral 68519* (VDB). **Galveston Co.:** *Waller 2579* (US). **San Saba Co.:** *Oliver 12* (SMU). **Tarrant Co.:** *Kral 91937* (VDB); *Whitehouse 16027* (SMU). **Val Verde Co.:** *Spjut & Marin 15152* (BRIT). See also taxa **4a, 6, 9i, 9i (as cv),** and **20** and section on hybrid synonymy: **18×20.**

19. Lantana paraensis (Moldenke) R.W. Sanders, comb. & stat. nov. BASIONYM: *Lantana cujabensis* Schauer var. *paraensis* Moldenke, Phytologia 48:290. 1981. TYPE: BRAZIL. Pará: Tucuruí, 17 Mar 1980, *Plowman et al. 9686* (HOLOTYPE: LL!; ISOTYPES: NY!, US!).

Lantana armata Schauer var. *guianensis* Moldenke, Phytologia 51:244.1982. TYPE: FRENCH GUIANA: Grand-Santi, 26 Aug 1961, *Schnell 11475* (HOLOTYPE: NY!).

Lantana cujabensis Schauer f. *albiflora* Moldenke, Phytologia 55:115. 1984. TYPE: BRAZIL. PARA: 0° 55'S, 54° 26'W, 23 Jul 1981, *Strudwick & Sobel 3404* (HOLOTYPE: LL!; ISOTYPES: MO!, NY!).

Shrubs rounded and ± open, lax, or subscandent; stems 0.5–5 m; branches ascending and several or clambering and few, occasionally herbaceous; twigs, peduncles and often petioles moderately setose or pilose, often with stipitate glands mixed in, or occasionally glabrescent, the hairs (0.1–)0.3–0.6(–1) mm. **Leaf-blades** broadly to narrowly ovate or ovate-elliptic, 3–9 cm long, the length 1.4–2.2 × width, nigrescent or not, papery, usually pinninerved; base rounded to subcordate and abruptly tapered onto petiole or cuneate; apex acuminate, sometimes with a prolonged narrow tip, or acute; marginal teeth 15–35 per side, rounded or acute, often appressed, then sometimes with tips recurved, with sinuses 0.5–1.5 mm deep; adaxial surface dull to occasionally lustrous, antrorsely strigose or strigose-setose, the hairs occurring on veins and intervening tissue, 0.1–0.6(–1.2) mm, 3–20/sq. mm, usually not noticeably vitreous-pustulate, the circular bases of the hairs ca. 0.1–0.2 mm in diam.; abaxial surface slightly lighter or duller green than adaxial surface, sometimes whitish green but not glaucous, antrorsely strigose to spreading-setose, with the hairs frequent on veins and veinlets, 0.1–0.7 mm, 3–10/sq. mm. **Inflorescences** often 2 per leaf axil, becoming short-cylindric (resembling spikes of *Carex lupulina*) by prolonged initiation of flowers; peduncles 0.5–1(–2) × leaf length. **Proximal bracts** lanceolate to lanceolate-elliptic, (4–)6–8(–10) mm long, (1.5–)2–3 mm wide, widest in proximal third to just below middle, with 5–7 veins from the base, spreading, persisting and recurved or reflexed (± distally) in fruit; apex acuminate with prolonged tip; indument setose or strigose to glabrescent, usually distinctly ciliate, the longest hairs (0.3–)0.5–1 mm. **Corolla** rose-pink or white with pale yellow throat and aging pinkish purple, rarely yellow to red-oranage; corolla tube 7–12 mm.

Distribution and habitat.— Brazil (central and eastern Amazonian), the Guianas, Venezuela (Amazonian) Colombia (Amazonian),and Bolivia (Amazonian); disturbance openings, savannas and man-made grasslands in tropical humid forest; 50–300 m.

Lantana paraensis exhibits characters of both *L. cujabensis* and *L. viscosa*, suggesting that it arose from natural hybrids of the two. Its species status is suggested by greater consistency in the expression of its traits than expected of a hybrid swarm and the much wider distribution than the area of sympatry of the proposed parental taxa.

Selected specimens examined: **BOLIVIA. Santa Cruz:** *Guillén & Roca 3523* (F). **BRAZIL. Amapá:** *Fróes & Black 27459* (LL[di]). **Amazonas:** *Croat 62252* (MO); *Tsugaru. & Sano B-598* (MO). **Pará:** *Ginzberger 822* (F); *Plowman et al. 9685* (F); *Secco et al. 198* (US). **Rondônia:** *Teixeira et al. 664* (F, NY). **COLOMBIA. Vichada:** *Davidse 5196* (MO). **FRENCH GUIANA. Saint-Laurent du Maroni:** *Marshall & Rombold 195* (MO). **SURINAME. Paramaribo:** *Florschütz & Florschütz 1693* (SMU). **Sipaliwini:** *Koemar et al. 18* (MO).

Presumed hybrids with: See also taxa **1d, 2c, 4b,** and **13.**

20. Lantana strigocamara R.W. Sanders, Sida 22:392. 2006. TYPE: U.S.A. FLORIDA. Dade Co.: Coral Gables, 23 Sep 1981, *Sanders 1450* (HOLOTYPE: FTG!; ISOTYPE: NY!).

Lantana mutabilis Lippold ex Otto & A. Dietr., Allg. Gartenzeitung 10:314. 1842. nom. illeg. TYPE: Unknown.

Shrubs erect or rounded, open; stems 0.3–3 m; branches ascending, several to numerous; twigs, peduncles and often petioles thinly to moderately strigose, setose, or pilose, the hairs 0.1–1.2(–1.5) mm, the longest mostly 0.5–1 mm. **Leaf-blades** ovate to broadly ovate, (2–)5–10 cm long, the length 1–1.7 × width, usually not nigrescent, papery, pinninerved; base rounded, truncate, or cordate, shortly and narrowly cuneate onto petiole at very base; apex usually acuminate; marginal teeth 15–40 per side, rounded to acute, often appressed, sometimes spreading at tip, with sinuses 0.5–1.5 mm deep; adaxial surface usually dull, antrorsely strigose or strigose-setose, the hairs occurring on veins and intervening tissue (sometimes just center of areoles), 0.2–1.2 (longest mostly 0.5–0.8) mm, 1–12/sq. mm, not noticeably vitreous-pustulate, the circular bases of the strigae ca. 0.1–0.2 mm in diam.; abaxial surface slightly lighter or duller green than adaxial surface, antrorsely strigose-scabrous, with the strigae scattered to moderately dense on veins and veinlets, 0.1–0.6 (longest ones usually 0.4–0.6) mm (sometimes accompanied by scattered short [mostly ≤ 0.3 mm] erect filiform hairs along

major veins), 4–20/sq. mm. **Inflorescences** remaining hemispheric; peduncles 0.5–1.2 × leaf length. **Proximal bracts** narrowly triangular, linear-lanceolate, or linear-oblong (including those with slight constriction in proximal third; occasionally 1 or 2 outermost bracts subfoliar or narrowly spatulate), (3–)5–8(–10) mm long, 0.8–1.5 (rarely an occasional subfoliar bract up to 2) mm wide, widest at or just above the base, with 3 veins from the base, appressed or spreading, deciduous after flowering; apex acute to attenuate; indument strigose or strigillose, hardly ciliate, the longest hairs 0.2–0.6 mm. **Corolla** opening yellow or creamy white (rarely pure white) with yellow throat, aging to cream, dark yellow, orange, or red (rarely remaining white), often infused with pink or purple; corolla tube 7–12 mm.

Distribution and habitat.—Of cultivated origin; cultivated worldwide and escaped pantropically (especially southern United States, Caribbean Basin, India, Sri Lanka, Southeast Asia, and tropical Africa); open woodland, thickets, disturbance openings and man-made grassland, calcareous or sandy soils; 0–2000 m.

Sanders (2006) discussed *Lantana strigocamara* at length, and Sanders (1987a) illustrated the species (as "*camara*").

Selected specimens examined: **AUSTRALIA. Queensland:** *McAndrew 49* (BRIT). **BANGLADESH. Sylhet:** *Huq 10517* (BRIT). **CUBA. Havana:** *Curtis 754*, possibly hybridized (NY); *Wilson 9548* (NY). **EQUATORIAL GUINEA. Bata-Monte Alen-Engon:** *Carvalho 5528* (TEX). **FRENCH GUIANA. Cayenne:** *Ildeman B. 782* (LL). **GERMANY. Berlin:** cult., Bot. Gard. Berlin-Dahlem, *Wagenitz W387* (LL). **LESSER ANTILLES. Montserrat:** *Krauss 1270* (LL[2]). **St. Lucia:** *Krauss 1239* (LL[2]). **MEXICO. Chiapas:** *Matuda 18550* (NY). **Veracruz:** *Alexander 1594* (seed cult. at New York Bot. Gard.) (NY). **PUERTO RICO. San Juan:** cult., *Smith P.R. 49* (LL). **SRI LANKA. Central:** *Silva 2264* (SMU). **SURINAME. Para:** *Moldenke & Moldenke 19573* (SMU). **THAILAND. Chantaburi:** *Larsen et al. 1848* (LL). **TRINIDAD & TOBAGO. St. Augustine:** cult., *Smith Tr. 10* (LL). **U.S.A. Alabama. Mobile Co.:** *Rogers 4224* (VDB); *Taylor & Taylor 15246* (BRIT). **Arizona. Puma Co.:** *Rill 7147* (BRIT[di]). **Florida. Broward Co.:** *Churchill s.n. 18 Jun1968* (SMU); *Kasarijan 2* (BRIT). **Dade Co.:** *Kral 53927* (VDB); *Moldenke 5803* (NY). **Duval Co.:** *Curtiss 5692* (NY). **Flagler Co.:** *Longbottom & Williams 11286* (NY). **Lee Co.:** *Moldenke 947* (NY). **Palm Beach Co.:** *McCart 9369*, possibly × *L.* Callowiana Hybrid Group cv. (BRIT). **Polk Co.:** *Kral 63258* (VDB). **Seminole Co.:** *Longbottom & Williams 11027* (NY). **Louisiana. Vermilion Par.:** *Reese 6085*, possibly × *L. urticoides* (SMU). **Mississippi. Harrison Co.:** *Demaree 30705* (SMU[di]). **South Carolina. Beaufort Co.:** *Leonard & Radford 2743 p.p.*, possibly × *L.* Callowiana Hybrid Group cv. (SMU[di]). **Orangeburg Co.:** *Leonard et al. 5001* (SMU). **Texas. Blanco Co.:** *Sanders 5211* (BRIT). **Cameron Co.:** cult., *Lundell & Lundell 8626* (SMU). **Dallas Co.:** cult., *Stewart 135* (SMU). **VENEZUELA. Distrito Capital:** *Novo 2* (NY); *Scholtz 01* (LL). **VIRGIN ISLANDS. Tortola:** *Krauss 1667* (LL).

Presumed hybrids with: **L. (Callioreas) montevidensis. U.S.A. California: Los Angeles Co.:** cult., *Towner s.n. 1957-63*, see comment under 9i-cv×20 (BRIT). See also taxa **1a, 1b, 1c, 1d, 1e, 1f, 2a, 2bi, 2c, 4a, 6, 9i, 9i (as cv.), 9ii, 9iii, 12a, 12b, 16,** and **18** and section on hybrid synonymy: **1e×10/20, 2a×20, 9i-cv×20, 9ii×20, 10×20, 15×13/20?,** and **18×20.**

SYNONYMY OF PUBLISHED TAXA BASED ON PRESUMED INTERSPECIFIC HYBRIDS

1×2×12. Lantana camara × L. horrida × L. nivea

Lantana antidotalis Schumach. & Thonn. in Schumach., Beskr. Guin. Pl. 276. 1827. Type: GHANA: *Thonning 125* (lectotype: C!; isotype: C!).

1a×6. Lantana camara subsp. camara × L. scabrida

Lantana camara L. f. *caffertyi* I.E. Méndez, Willdenowia 32:294. 2002. Type: CUBA. Guantánamo: Yateras, 23 Jan 1996, *Méndez & Romano 8630* (holotype: HIPC[di!]).

1a×16. Lantana camara subsp. camara × L. bahamensis

Lantana bahamensis Britton f. *canescens* Moldenke, Phytologia 31:26. 1975. Type: BAHAMA ARCHIPELAGO. North Caicos Island: 1 Sep 1974, *Correll 43382* (holotype: NY!; isotypes: FTG!, LL!).

1d×2c. Lantana camara subsp. moritziana × L. horrida subsp. tiliifolia

Lantana tiliifolia Cham. var. *scabra* Schauer, Fl. Bras. [Martius] 9:257.1851. Type: GUYANA: 1837, *Schomburgh Pl. Guian. exs. 196* (lectotype, here designated: G-DC, mixed sheet, left specimen, barcode G00219524[di!]; isotypes: K, barcode:K000470755 [di!], W!).

Lantana camara L. [var. moritziana (Otto & A. Dietr.) López-Pal.] f. *aculeifera* Moldenke, Phytologia 52:129. 1982. Type: COLOMBIA. Boyacá: Boavita, 16 Sep 1938, *Cuatrecasas 1920* (holotype: US!).

1d×6. Lantana camara subsp. moritziana × L. scabrida

Lantana armata Schauer var. *velutina* Moldenke, Phytologia 23:180. 1972. Type: VENEZUELA. Tachira: Ureña, 8 Dec 1971, *López-Palacios 2616* (holotype: LL!; isotypes: NY[2]!).

1d×12b. Lantana camara subsp. moritziana × L. nivea subsp. mutabilis

Lantana camara L. f. *rubello-flavescens* Moldenke, Phytologia 50:309. 1982. Type: ECUADOR. Azuay: Chullabamba, cult., 10 Oct 1981. *Dodson & Dodson 11750* (holotype: LL!; isotype: MO!).

1ex2a. Lantana camara subsp. glandulosissima × L. horrida subsp. horrida

Lantana horrida Kunth f. *microphylla* Moldenke, Phytologia 40:260. 1978. TYPE: MEXICO. DURANGO: El Salto, 6 Jun 1967, *A. Moldenke 1495* (HOLOTYPE: AAU!).

Lantana glandulosissima Hayek f. *aculeatissima* Moldenke, Phytologia 47:223. 1980. nom. illeg., publ. without type. TYPE: none.

1ex2ax10. Lantana camara subsp. glandulosissima × L. horrida subsp. horrida × L. kingii

Lantana urticoides Hayek f. *aculeata* Moldenke, Phytologia 49:182. 1981. TYPE: MEXICO. PUEBLA: Tehuacán, 4 Aug 1966, *Smith & Corona Mex-28* (HOLOTYPE: MEXU[di!]).

1ex4a. Lantana camara subsp. glandulosissima × L. hirsuta subsp. hirsuta

Lantana glandulosissima Hayek var. *grandis* Moldenke, Phytologia 52:230. 1982. TYPE: PANAMA: Fort Sherman, 14 Jun 1923, *Maxon & Valentine 6988* (HOLOTYPE: US!).

1ex10. Lantana camara subsp. glandulosissima × L. kingii

Lantana glandulosissima Hayek f. *parvifolia* Moldenke, Phytologia 49:182. 1981. TYPE: MEXICO. SAN LUIS POTOSÍ: 3 Aug 1956, *Rzedowski 7933* (HOLOTYPE: MEXU[di!]).

1ex10/20. Lantana camara subsp. glandulosissima × L. kingii or L. strigocamara

Lantana camara L. [var. moritziana (Otto & A. Dietr.) López-Pal.] f. *albiflora* Moldenke, Phytologia 47:223. 1980. TYPE: MEXICO. MORELOS: Yantepec, 14 Aug 1950, *Wyatt 45* (HOLOTYPE: MEXU[di!]).

1fx2. Lantana camara subsp. aculeata × L. horrida (probably subsp. horrida)

Lantana mutabilis C.E. Weigel, Physiogr. Salsk. Handl. 1:46. 1776. TYPE: cult., Greifswald Bot. Gard., Aug 1774, *Pyl s.n.* (LECTOTYPE: JE[di!]).

1fx4. Lantana camara subsp. aculeata × L. hirsuta

Lantana mista L., Syst. Nat., ed. 12. 2:417. 1767. *Camara aculeata* (L.) Kuntze [var. *subinermis* Kuntze] f. *mista* (L.) Kuntze, Revis. Gen. Pl. 2:503. 1891. nom. illeg. (see taxon 1f) *Lantana aculeata* L. f. *mista* (L.) Voss, Vilm. Blumengärtn. ed.3, 1:823. 1894 (as "mixta"). *Lantana camara* L. var. *mista* (L.) L.H. Bailey, Cycl. Amer. Hort. [L.H.Bailey] 884. 1900. *Lantana camara* L. f. *mista* (L.) Moldenke, Phytologia 45:296. 1980. LECTOTYPE: icon in Dillenius, Hort. Eltham. t.56, f.64. 1732.

Lantana albopurpurea Desf., Tabl. École Bot., ed. 3 (Cat. Pl. Horti Paris) 392. 1829. TYPE: cult., Hort. Paris. *s. coll.* (LECTOTYPE: FI[di!]).

1fxC. Lantana camara subsp. aculeata × L. sp. Ser. Strigosae

Lantana purpurea Hornem., Hort. Bot. Hafn. 2:583. 1815. TYPE: cult., Hort. Hafniensis 1814, *s. coll.* (HOLOTYPE: C!).

2xC. Lantana horrida (probably subsp. horrida) × L. sp. Ser. Strigosae

Lantana flava Medik., Hist. & Commentat. Acad. Elect. Sci. Theod.-Palat. 3. Phys. 225. 1775. *Lantana camara* L.f. *flava* (Medik.) Moldenke, Phytologia 45:296. 1980. LECTOTYPE: icon in Dillenius, Hort. Eltham. t.57, f.66. 1732.

2ax4a. Lantana horrida subsp. horrida × L. hirsuta subsp. hirsuta

Lantana polyacantha Schauer, Prodr. [A.P. de Candolle] 11:597. 1847. TYPE: MEXICO: *Schiede s.n.* (HOLOTYPE: B, destroyed [Macbride Neg. 17481, F!]; LECTOTYPE, here designated: P, barcode P00713484[di!])

Lantana horrida Kunth f. *inermis* Moldenke, Phytologia 52:130.1982. TYPE: MEXICO: Yucatán, *Gaumer 808* (HOLOTYPE: US!).

2ax10. Lantana horrida subsp. horrida × L. kingii

Lantana urticoides Hayek f. *macrophylla* Moldenke, Phytologia 49:431. 1981. TYPE: MEXICO. SONORA: San Bernardo, 13 Jul 1967, *Hernández 424* (HOLOTYPE: MEXU[di!]).

2ax20. Lantana horrida subsp. horrida × L. strigocamara

Lantana camara L. var. *rubella* Moldenke, Phytologia 3:61. 1949. *Lantana camara* L. f. *rubella* (Moldenke) Moldenke, Phytologia 45:296. 1980. *Lantana aculeata* L. f. *rubella* (Moldenke) I.E. Méndez, Willdenowia 32:290. 2002. (Misapplied to *Lantana* Callowiana Hybrid Group pink-flowered cvs.) TYPE: CUBA. Havana: Guanabacoa, 27 Nov 1948, *Moldenke & Moldenke 19861* (HOLOTYPE: NY!; ISOTYPE: US!).

2cx4b. Lantana horrida subsp. tiliifolia × L. hirsuta subsp. amazonica

Lantana armata Schauer, Linnaea 20:480. 1847. TYPE: VENEZUELA. Caracas, *Moritz 292* (LECTOTYPE: BM, barcode BM000992637[di!]; ISOTYPE: W!).

Lantana weberbaueri Hayek in Urb., Bot. Jahrb. Syst. 42:166. 1908. TYPE: PERU. JUNÍN: Tarma, *Weberbauer 2017* (HOLOTYPE?: B, destroyed [Macbride Neg. 17493, LL!, US!]).

Lantana micrantha Briq. f. *eitenorum* Moldenke, Phytologia 32:334. 1975. TYPE: BRAZIL. SÃO PAULO: Muji-Gauçu, 31 Jul 1964, *Eiten & Eiten 5629* (HOLOTYPE: US!; ISOTYPE: K[di!]).

2cx12b. Lantana horrida subsp. tiliifolia × L. nivea subsp. mutabilis

Lantana camara L. f. *glandulosa* R. Fern., Bol. Soc. Brot. sér. 2, 61:132. 1988. TYPE: ANGOLA. MALANJE: Pungo Andongo, *Welwitsch 5676* (HOLOTYPE: COI, n.v.; ISOTYPES: BM[di!], K[di!], LISU p.p.).

2c×13. Lantana horrida subsp. tiliifolia × L. cujabensis

Lantana glutinosa Poepp. var. *rugosa* Moldenke, Phytologia 46:58. 1980. TYPE: PERU. JUNÍN: Latipo, Aug 1945, *Soukup 2862* (HOLOTYPE: NY!).

2c×17. Lantana horrida subsp. tiliifolia × L. planaltensis

Lantana tiliifolia Cham. f. *albiflora* Moldenke, Phytologia 3:311. 1950. TYPE: ARGENTINA. MISIONES: San Ignacio, 7 Mar 1946, *Schwarz 2185* (HOLOTYPE: NY!). Alternatively *nivea* subsp. *mutabilis* could possibly be the second parent of this specimen.

2/4×? Complex hybrid involving Lantana horrida or L. hirsuta

Lantana hybrida Hort. ex Neubert, Deutsch. Mag. Garten-Blumenk. 10:98. 1857. nom. illeg. *Lantana aculeata* L. var. *hybrida* (Hort. ex Neubert) Voss, Vilm. Blumengärtn. ed.3, 1:823. 1894. nom. illeg. LECTOTYPE: icon in Neubert, Deutsch. Mag. Garten-Blumenk. 10:t. facing p. 112. 1857.

4a×10. Lantana hirsuta subsp. hirsuta × L. kingii

Lantana hirta Graham f. *ternata* Moldenke, Phytologia 8:160. 1962. TYPE: MEXICO. NUEVO LEÓN: Cañon Diente, 8 Dec 1939, *Muller 2686* (HOLOTYPE: UC[di!]). Name based on a teratological specimen.

Lantana horrida Kunth f. *bracteosa* Moldenke, Phytologia 52:231. 1982. TYPE: MEXICO. PUEBLA: Puebla, 15 Sep 1910, *Arsène 5426* (HOLOTYPE: US!). May also include hybridization with *L. camara* subsp. *glandulosissima*.

4b×12a. Lantana hirsuta subsp. amazonica × L. nivea subsp. nivea

Lantana robusta Schauer, Prodr. [A.P. de Candolle] 11:601. 1847. TYPE: BRAZIL: Rio de Janeiro, *Pohl 40-5955 (D.n. 182)* (LECTOTYPE: W[photo id. 1504]!; ISOTYPE: W[photo id. 1503]!). Remaining SYNTYPES: BRAZIL: *Raben 509* (BR [photo at F!, LL!], NY[fragment]!).

Lantana minasensis Moldenke var. *longibracteata* Moldenke, Phytologia 13:242. 1966. *Lantana triplinervia* Turcz. var. *longibracteata* (Moldenke) Moldenke, Phytologia 28:403. 1974. TYPE: BRAZIL. MINAS GERAIS: Muriaé, 7 Jul 1964, *Castellanos 24984* (HOLOTYPE: LL!).

4b×13. Lantana hirsuta subsp. amazonica × L. cujabensis

Lantana cujabensis Schauer var. *hispida* Moldenke, Phytologia 46:58.1980. TYPE: ECUADOR. ESMERALDA: Lita, 8 Jun 1978, *Madison et al. 5016* (HOLOTYPE: AAU!; ISOTYPES: F, QCA, SEL).

4b×15. Lantana hirsuta subsp. amazonica × L. micrantha

Lantana micrantha Briq. var. *armata* Moldenke, Phytologia 2:468.1948. TYPE: BOLIVIA. COCHABAMBA: Arani ["Arami"], Feb 1944, *Cárdenas 2380* (HOLOTYPE: NY!).

9i-cv×20. L. Callowiana Hybrid Group cultivars (derived from tetraploid cv. L. depressa var. depressa × L. strigocamara)

Lantana callowiana Monrovia Nursery, Monrovia Nursery Catalog 1952–1953:44. 1952. nom. illeg. TYPE: none.

Lantana camara L. var. *nana* Moldenke, Phytologia 28:402. 1974. *Lantana camara* L. f. *nana* (Moldenke) Moldenke, Phytologia 45:296. 1980. TYPE: U.S.A. NEW YORK: cult., New York. Bot. Gard., 14 Oct 1941, *Moldenke & Moldenke 11903* (HOLOTYPE: NY!). This is either an early development release from Monrovia Nursery or an independent cultivation of a wild-collected hybrid between *L. depressa* var. *depressa* and *L. strigocamara*.

Lantana bahamensis Britton f. *albiflora* Moldenke, Phytologia 31:360. 1975. TYPE: U.S.A. GEORGIA: Glynn Co.: Jekyll Island, 20 May 1975, *Moldenke & Moldenke 29885* (HOLOTYPE: LL, n.v.; ISOTYPE: LL!). *Lantana* Callowiana Hybrid Group 'Cream Carpet'.

Sanders (2001) argued that the parents of the Callowiana Hybrid Group were *Lantana strigocamara* and *L. depressa* var. *depressa* rather than *L. strigocamara* and *L. montevidensis* (as claimed by Monrovia Nursery, see Howard 1969) based on character intermediacy and chromosome number incompatability of the latter combination. However, one likely hybrid of *L. montevidensis* with *L. strigocamara* was seen for this study (see taxon **20**), but it is very different in character details from the Callowiana Hybrid Group cvs, as well as appears to be sterile.

9ii×20. Lantana depressa var. floridana × L. strigocamara

Lantana floridana Raf., Atlantic J. 148. 1832. TYPE: unknown.

Lantana bartramii Baldwin, Reliq. Baldw. 247. 1843. TYPE: unknown. Besides items noted in Sanders (2006), "foliis ovatis" and "caule aculeato" in the very brief protologue suggest hybridity.

10×1a/1e? Lantana kingii hybrid (× L. camara subsp. camara or subsp. glandulosissima?)

Lantana camara L. f. *parvifolia* Moldenke, Phytologia 2:467. 1948. *Lantana aculeata* L. f. *parvifolia* (Moldenke) I.E. Méndez, Willdenowia 32:290. 2002. (Misapplied to *Lantana* Callowiana Hybrid Group multicolored cvs.) TYPE: U.S.A.: cult., New York. Bot. Gard., 27 Mar 1948, *Without collector* (HOLOTYPE: NY[di!]) Seeds vouchered by *Alexander & MacDougall 1580* (MEXICO. OAXACA: Tehuantepec); wild-collected specimen not found.

10×2a/4a? Lantana kingii hybrid (× L. horrida subsp. horrida or L. hirsuta subsp. hirsuta?)

Lantana hispida Kunth var. *ternata* Moldenke, Phytologia 2:225. 1947. TYPE: MEXICO. PUEBLA: Necaxa, Apr 1946, *Aguirre & Reko 172* (HOLOTYPE: NY!).

12×6/7? Lantana nivea × L. scabrida or L. splendens?

Lantana multiflora Otto & A. Dietr., Allg. Gartenzeitung 9:370. 1841. *Lantana camara* L. var. *multiflora* (Otto & A. Dietr.) Moldenke, Phytologia 2:18. 1941. *Lantana camara* L. f. *multiflora* (Otto & A. Dietr.) Moldenke, Phytologia 45:296. 1980. TYPE: cult., Hort. Berlin, *Otto s.n.* (LECTOTYPE: B, destroyed).

12a×14. Lantana nivea subsp. nivea × L. viscosa

Lantana pohliana Schauer, Prodr. [A.P. de Candolle] 11:601. 1847. *Camara pohliana* (Schauer) Kuntze, Revis. Gen. Pl. 2:504. 1891. TYPE: BRAZIL. GOIÁS: "Inter Pirapora et Jenipapa," *Pohl 3088 (D.n. 188)* (LECTOTYPE, here designated: W[photo id. 1501]!; ISOTYPES: B, destroyed [Macbride Neg. 17480 at BRIT!, F!, GH!], F [fragment]!, K[2,di!], W [photo id. 1502]!,).

The collections known to me combine the reduced leaves subtending inflorescences typical of some *Lantana nivea* subsp. *nivea* (see comments, taxon **12a**) and the stipitate glands, bracts, and elongating receptacles of *L. viscosa*. They are geographically restricted near the type locality of *L. pohliana*, which is the area of sympatry of the two species. For a narrowly endemic taxon, they exhibit a pronounced inconsistency in structure, length, and density of trichomes compared to other natural taxa. These data suggest that the collections represent independent spontaneous hybrids, or at most, an unstable hybrid swarm. Thus, *L. pohliana* is not recognized as a taxon.

12b×17. L. nivea subsp. mutabilis × L. planaltensis

Lantana minasensis Moldenke var. *puberulenta* Moldenke, Phytologia 25:220. 1973. *Lantana triplinervia* Turcz. var. *puberulenta* (Moldenke) Moldenke, Phytologia 28:403. 1974. TYPE: BRAZIL. BAHIA: Cocos, 17 Mar 1972, *Anderson et al. 37123* (HOLOTYPE: LL!).

15×13/20? L. micrantha × L. cujabensis or L. strigocamara

Lantana micrantha Briq. f. *violacea* Moldenke, Phytologia 2:468.1948. TYPE: ARGENTINA. CHACO: Colonia Benitez, Nov 1935, *Schulz 1459* (HOLOTYPE: NY!).

18×20. L. urticoides × L. strigocamara

Lantana rubra Berland. in Terán & Berland., Mem. Comisión Límites 15. 1832. LECTOTYPE: icon in Berlandier in Ohlendorf et al., transl. Journey Mex., t.5 (top, facing p. 410). 1980. (see Sanders 2006)

EXCLUDED AND DUBIOUS NAMES

Lantana asperata Hort. ex Vis., Orto Bot. Padova 142. 1842. nom. nud. TYPE: unknown.

Lantana bahiensis Turcz., Bull. Soc. Imp. Naturalistes Moscou 36:206. 1863. TYPE: BRAZIL. BAHIA: *Salzmann s.n.* (HOLOTYPE: KW[di!]). Species of *Lantana* sect. *Callioreas*. (Misapplied to *L. planaltensis* by Moldenke in sched.)

Lantana camara L. var. *rosea* Mattoon, Plant Buyer's Guide, ed. 6. 167. 1958. nom. nud. *Lantana camara* L. f. *rosea* (Mattoon) Moldenke, Phytologia 45:296. 1980. nom. illeg. TYPE: none.

Lantana camara L. var. *rubra* Mattoon, Plant Buyer's Guide, ed. 6. 167. 1958. nom. nud. *Lantana camara* L. f. *rubra* (Mattoon) Moldenke, Phytologia 45:296. 1980. nom. illeg. TYPE: none.

Lantana cujabensis Schauer var. *punctata* Moldenke, Phytologia 2:411. 1948. ≡ *Lantana lopez-palacii* Moldenke, Phytologia 27:359. 1973. TYPE: COLOMBIA. ANTIOQUIA: Ceja, 1 Nov 1947, *Barkley et al. 1536* (HOLOTYPE: MEDEL, n.v.). Species of *Lantana* sect. *Callioreas*.

Lantana hispida Kunth f. *alba* Moldenke, Phytologia 9:99. 1963. TYPE: GUATEMALA. PETÉN: Tikal ruins, 9 Jun 1960, *Contreras 1056* (HOLOTYPE: LL!). Aff. *L. hirta* Grah. of sect. *Callioreas*.

Lantana hispida Kunth f. *parvifolia* Moldenke, Phytologia 52:130.1982. TYPE: HONDURAS. MORAZÁN: Ciudad Universitaria, 26 May 1978, *Romero 71* (HOLOTYPE: MO!). Aff. *L. velutina* M. Martens & Galeotti of sect. *Callioreas*.

Lantana micrantha Briq. var. *beckii* Moldenke, Phytologia 50:13. 1981. TYPE: BOLIVIA. BENI: Ballivián, 12 Apr 1981, *Beck 5339* (HOLOTYPE: LL!). Aff. *L. fucata* Lindl. of sect. *Callioreas*.

Lantana multicolor Lem., Fl. Serres Jard. Eur. 3:239. 1847. nom. dub. TYPE: unknown.

Lantana notha Moldenke, Phytologia 1:422. 1940. TYPE: MEXICO. SINALOA: Fuerte, 27 Mar 1910, *Rose et al. 13573* (HOLOTYPE: NY!). Aff. *L. hirta* Grah. of sect. *Callioreas*.

Lantana pulchra Larrañaga, Escritos Dámaso Antonio Larrañaga 1:406. 1922 [Pub. Inst. Geog. Urag.]. nom. dub. TYPE: Destroyed.

Lantana purpurea (Jacq.) Benth. & Hook.f., Gen. Pl. [Benth. & Hooker f.] 2(2):1142. 1876. nom. illeg. (non Hornem.) Species of *Lippia* or *Lantana* sect. *Callioreas*.

Lantana riedeliana Schauer var. *pubescens* Moldenke, Phytologia 19:435. 1970. TYPE: BRAZIL: Rio de Janeiro, *Pabst 9310* (HOLOTYPE: LL!). Aff. *L. fucata* Lindl. of sect. *Callioreas*.

Lantana rosea Raf., Sylva Tellur. 83. 1838. TYPE: unknown. Probably a species of *Lantana* sect. *Callioreas*.

EPITHET INDEX (USING TAXON AND HYBRID SYNONYMY CODES; EDN=EXCLUDED AND DUBIOUS NAMES)

aculeata:1a, 1f, 12a, 12b, 1e×2a×6, 1f×4, 2a×20, 2/4×?, 10×1a/1e?. **aculeatissima:**1e×2a. **aculeifera:**1d×2c. **alba:**12a, EDN. **albiflora:**1e, 19, 1e×10/20, 2c×17, 9i-cv×20. **albopurpurea:**1f×4. **amazonica:**4b. **amethystina:**12b. **antidotalis:**1×2×12. **antillana:**2. **arida:**1b, 2b, 2bi. **armata:**1d, 12b, 19, 1d×6, 2c×4b, 4b×15. **asperata:**EDN. **aurea:**9i. **bahamensis:**9ii, 16, 1a×16, 9i-cv×20. **bahiensis:**EDN. **bartramii:**9ii×20. **beckii:**EDN. **bracteosa:**4a×10. **brittonii:**6. **caffertyi:**1a×6. **callowiana:**9i-cv×20. **camara:**1, 1a–1e, 2a, 2b, 7, 12a, 12b, 14, 1a×6, 1d×2c, 1d×12b, 1e×10/20, 1f×4, 2×C, 2a×20, 2c×12b, 9i-cv×20, 10×1a/1e?, 12×6/7?, 12a×14, EDN. **canescens:**1a×16. **coccinea:**1f. **crenulata:**6. **crocea:**1a, 6. **cujabensis:**13, 19, 4b×13, EDN. **cummingiana:**2c. **depressa:**9, 9i–9iii. **eitenorum:**2c×4b. **flava:**1e, 6, 2×C. **floridana:**9ii, 9ii×20. **foetida:**2c. **formosa:**1a. **glandulosa:**2c, 2c×12b. **glandulosissima:**1e, 2bi, 1e×2a, 1e×4a, 1e×10. **glutinosa:**2c, 2c×13. **grandiflora:**2a. **grandis:**1e×4a. **guatemalensis:**6. **guianensis:**19. **hirsuta:**4, 4a, 4b. **hirta:**4a×10. **hispida:**2a, 17, 4b×13, 10×2a/4a?, EDN. **hispidula:**18. **hodgei:**8. **horrida:**2, 2a–2c, 18, 1e×2a, 2a×4a, 4a×10. **hybrida:**2/4×? **incarnata:**12b. **inermis:**2a×4a. **insularis:**5. **kingii:**10. **latibracteata:**18. **leonardiorum:**3. **longibracteata:**4b×12a. **lopez-palacii:**EDN. **macrantha:**2a. **macrophylla:**2a×10. **micrantha:**15, 2c×4b, 4b×15, 15×13/20?, EDN. **microphylla:**1e×2a. **minasensis:**12a, 17, 4b×12a, 12b×17. **mista:**1f, 1f×4. **moldenkei:**1c. **montevidensis:**9i. **morii:**12a. **moritziana:**1d, 1e, 1d×2c, 1e×10/20. **multicolor:**EDN. **multiflora:**12×6/7?. **mutabilis:**1f, 12b, 20, 1f×2. **nana:**9i-cv×20. **nivea:**1f, 12, 12a, 12b. **normalis:**1f, 12b. **notha:**EDN. **obtusifolia:**1a. **orientalis:**2c. **ovatifolia:**9i, 11. **paraensis:**19. **parviflora:**2a. **parvifolia:**1e, 9i, 13, 1e×10, 10×1a/1e?, EDN. **planaltensis:**17. **pohliana:**12a×14. **polyacantha:**2a×4a. **portoricensis:**1b. **puberulenta:**12b×17. **pubescens:**EDN. **pulchra:**EDN. **punctata:**EDN. **purpurea:**1f×C, EDN. **reclinata:**9i. **riedeliana:**13, EDN. **robusta:**4b×12a. **rosea:**EDN. **rubella:**2a×20. **rubello-flavescens:**1d×12b. **rubra:**18×20, EDN. **rugosa:**2c×13. **sandersii:**6. **sanguinea:**1f. **sanibelensis:**9iii. **sargentii:**2bi. **scabra:**1d×2c. **scabrida:**6. **scabrifolia:**13. **scandens:**6. **scorta:**4a. **splendens:**7. **strigocamara:**20. **suaveolens:**1f. **subcordata:**2bii. **subinermis:**1a, 1f, 12a, 12b, 1f×4. **tenuifolia:**13. **ternata:**2a, 4a×10, 10×2a/4a? **ternifolia:**1d. **tiliifolia:**2c, 1d×2c, 2c×17. **triplinervia:**12a, 12b, 17, 4b×12a, 12b×17. **urticifolia:**1a, 1b, 1c, 2b. **urticoides:**18, 1e×2a×6, 2a×10. **varia:**1f. **variagata:**1f. **velutina:**1d×6. **violacea:**15×13/20? **viscosa:**14. **vulgaris:**1a. **weberbaueri:**2c×4b. **zanonii:**2b, 2bi, 2bii.

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